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Agricultural Income and Finance

Situation and Outlook Report

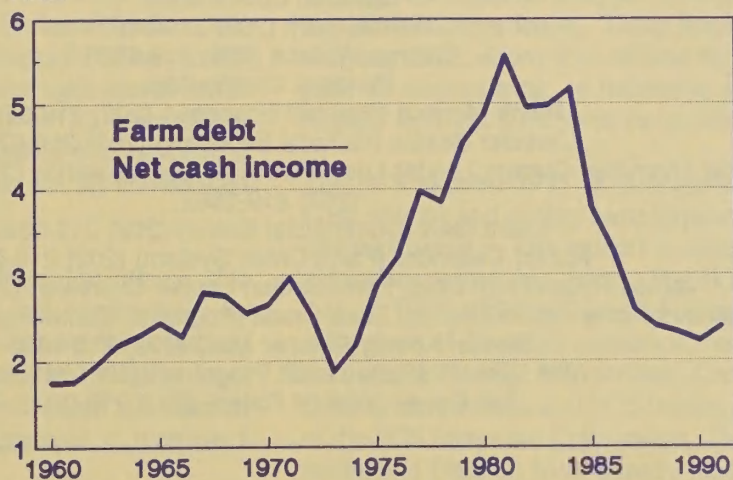
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Farmers Reduce Debt Load

Ratio



Annual Lender Issue

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Summary

Financial institutions serving agriculture experienced continued stable to improved conditions in 1992, and some modest additional gains are expected in 1993. Farm lenders' portfolios benefit from the careful management and sustained recovery of the farm sector from the financial stress of the 1980's. Total farm debt (excluding households) at yearend 1992 is estimated at \$139.7 billion, up 0.7 percent from a year earlier, but 27.9 percent below the 1984 peak of \$193.8 billion. Total farm debt increased an estimated \$909 million during 1992 and commercial banks, with a 3.9 percent increase, were the only institutional farm lender category to expand farm loans outstanding.

The delinquent share of loan portfolios was largely steady at mid-1992. Commercial banks and life insurance companies experienced small seasonal increases from yearend 1991, but the Farm Credit System (FCS) rate declined slightly. The Farmers Home Administration (FmHA) loan delinquency rate increased from 44.4 percent at midyear 1991 to 46.1 percent a year later. Loan chargeoffs were negligible for commercial banks while the FCS experienced a net addition to loan loss reserves. FmHA chargeoffs at \$1.9 billion were down 17.6 percent from the previous year.

Ample credit is available with the exception of certain special types of farm borrowers, such as beginning farmers, who are generally considered higher risk and may be less able to obtain credit. Farmers remain careful about acquiring additional debt, a fact that is unlikely to change unless economic fundamentals alter substantially. Lenders are more thorough in conducting cash flow and collateral analyses and face more uniformity in regulatory treatment.

Management adjustments in the late 1980's made farmers and lenders better able to address financial difficulty. There is substantial excess capacity among agricultural lenders; demand is not strong and supply is considerable. Loan-to-deposit ratios inched up to 58.1 percent for agricultural banks in September. This is up from the low of 53.4 percent in 1987 and compares with the record high of 68.2 percent in 1968. The average loan-to-deposit ratio for all commercial banks in mid-1992 was 77 percent.

Lenders desiring to add farm loans to their portfolios in this keenly competitive environment must bid aggressively by offering specialized credit services and competitive interest rates. Lower net farm income in 1993 and modest asset growth portend minimal increases in real estate and nonreal estate borrowing. Total farm debt is expected to increase 1 to 2 percent in 1993.

Interest rates on new agricultural loans declined about 190 basis points for nonreal estate and about 40 basis points for real estate from their 1991 annual levels. The average interest rate on all outstanding farm debt has declined from the 1982 high of 11.01 percent to an estimated 9.26 percent in 1992. Interest rates on new nonreal estate loans averaged 6.8 percent at large commercial banks, 9.4 percent at other commercial banks, and 8.2 percent for the FCS in 1992. New real estate

loans averaged 9.6 percent at life insurance companies, 9.5 percent for commercial banks, and 8.3 percent for the FCS. Interest rates on new farm loans are expected to increase modestly throughout 1993, more so for nonreal than real estate loans.

Farm banks now are among the strongest institutions in the banking system. Annualized mid-1992 results indicate a return on assets of 1.3 percent at farm banks, well above the low of 0.4 percent in 1986 and the current industry average of 0.9 percent. Only 2.3 percent of farm bank loans were nonperforming at mid-1992 and chargeoffs of farm nonreal estate loans were only 0.1 percent of all such loans through mid-1992.

Farm banks' return on equity at midyear was 13.3 percent, compared with small nonagricultural banks at 12.1 percent. Farm banks also were more highly capitalized with a capital-to-asset ratio of 10.5 percent, compared with 9.5 percent at other small banks. The number of farm bank failures--7 in 1992--indicates a general absence of serious financial problems among farm banks.

Direct FmHA lending during fiscal 1992 was \$714.5 million, up \$80.8 million from the previous year, but still 85 percent below the fiscal 1985 level. Outstanding principal on direct farm loans declined \$1.9 billion from mid-1991 to mid-1992 and is 42.8 percent below its mid-1985 level. The decline was due to reduced lending volume, loan restructuring, and loan writeoffs. Total outstanding direct loans of \$15.9 billion were the lowest since 1978. Guaranteed lending accounted for 69 percent of new loans in fiscal 1992, up from 19.8 percent in 1985.

Through loan restructuring and foreclosures, FmHA is reducing its delinquent loans. These loans totaled \$5.2 billion at midyear 1992, down \$3.6 billion from 4 years earlier. The pace of restructuring, writedowns, and settlements was up slightly in fiscal 1992 over the previous year.

The FCS entered 1993 in strengthened financial condition. Loan volume and quality have improved as have earnings and earnings quality. The system continues to build capital and reduce nonperforming assets. The FCS Safety and Soundness Act of 1992 addressed several important issues, including repayment of financial assistance, resolution of the status of the Jackson Federal Intermediate Credit Bank (FICB), clarification and expansion of FCS lending powers, and fine tuning of the FCS Insurance Corporation. Two assisted banks (Louisville and Omaha) have already made sufficient reserves to repay their obligations. In a move expected to enhance efficiency, the St. Paul and St. Louis Farm Credit Banks merged to form Agribank FCB. Assisted districts continue to recover.

Farmer Mac guaranteed three farm mortgage pools totaling \$569 million in 1992. Farmer Mac II, the secondary market for FmHA guaranteed farm loans, continued to grow in 1992, with market volume doubling to \$24 million.

Sluggish Recovery Continues Through 1992

Economy's effect on agriculture in 1993: Demand is likely to rise while inflation remains low, but interest rates will probably rise.

Though the National Bureau of Economic Research declared that the recession officially ended in March 1991, production and employment growth remained low well into 1992. Real gross domestic product (GDP) grew only 2.1 percent in 1992, and in the fourth quarter of the year was only 3.8 percent above the first quarter of 1991 (the last quarter of the recession). At a similar point in the recovery from the 1981-82 recession, real GDP had risen 10.8 percent.

Minor Employment Gains, Production Pace Quickens Slightly

The unemployment rate at the end of 1992 was little changed from the end of 1991, although almost 2 percentage points above the rate at the recession's start in July 1990. However, during 1992 the rate rose to 7.7 percent in June, before subsiding to 7.3 percent in December. On balance, only about 600,000 jobs were added in 1992, compared with an average of almost 2 million jobs per year during the 1980's. The manufacturing sector lost about 250,000 jobs.

While manufacturing employment was shrinking, production was rising. Industrial production rose 2.9 percent from December 1991 to December 1992, with much of the increase occurring in the second half of the year. Capacity use in December reached 79.3 percent, about a percentage point above March 1991 and the highest rate in more than a year. However, 20 months after the official end of the recession, capacity use was still more than 4 percentage points below its pre-recession level.

Consumer Spending Rises in Second Half, Confidence Picks Up at Yearend

Consumers contributed significantly to economic growth in 1992, with spending up 2.2 percent in 1992, compared with a decline of 0.6 percent in 1991. Retail sales rose 5.1 percent in 1992, compared with less than 1 percent in 1991 and 4.5 percent in 1990. However, sales at food stores fell slightly in 1992. So far in the 1990's, consumer spending growth is relatively low compared with the 2.8-percent average annual growth in the 1980's.

Disposable income did not keep pace with consumer spending in 1992, so consumers dipped into their savings. Although the personal savings rate inched up from 4.7 percent in 1991 to 4.8 percent in 1992, it fell sharply in the second half of the year and remains well below the 6.5-percent average during the 1980's.

Despite slim job prospects and weak income growth, consumer confidence jumped after the presidential election in

1992, contributing to a year-end bounce in consumer spending. In December, the University of Michigan's index of consumer sentiment reached its highest reading in nearly 2 years, returning confidence to its pre-recession level.

Inflation Remains Quiet

Inflation remained low throughout 1992. Consumer prices rose 2.9 percent, the lowest rate since 1986. Contributing to low overall consumer price inflation, food prices rose only 1.5 percent during the year, the smallest increase since 1976. Excluding food and energy, consumer prices rose only 3.3 percent in 1992, the smallest increase since 1972.

Interest Rates Remained Relatively Low in 1992

The weak economy and attempts by the Federal Reserve to revive it contributed to further interest rate declines in 1992. Three-month Treasury bill rates averaged 3.5 percent in 1992 compared with 5.4 percent in 1991. Yields on thirty-year Treasury bonds averaged 7.7 percent in 1992, down from 8.1 percent in 1991.

Moderate Growth Expected in 1993

Many analysts are predicting GDP growth of around 3 percent for 1993, about 1 percentage point faster than 1992. Faster growth is expected to raise short-term interest rates somewhat, but relatively high unemployment and low capacity use will tend to keep inflation low, helping to keep long-term interest rates from rising appreciably. Exports are not expected to add much to growth in 1993 since sluggish growth is likely in Europe and Japan. Private forecasters predict Germany's real GDP to fall 0.2 percent in 1993 and Japan's real GDP to increase just under 2 percent, compared with average gains of 4.6 percent from 1986 to 1990.

Implications for Agriculture

Faster overall growth in 1993 should generate larger consumer income gains, providing some demand support for agriculture. Continued low inflation will tend to keep input cost increases modest. However, the slight rise in interest rates will, in turn, increase interest expense somewhat. Modestly higher interest rates should slightly raise the dollar's foreign exchange value. The dollar hit historic lows against the German mark in September, but, by the end of 1992, it had risen again. Because it still remained relatively low vis-a-vis the yen and the mark going into 1993, the exchange rate should help to keep U.S. exports competitive. However, the positive effect that a relatively low dollar has on trade could be reduced by sluggish growth in Japan, the largest buyer of U.S. agricultural exports, and the expected economic contraction in Germany.

The economy was sluggish in the first half of 1992, but real GDP grew moderately in the second half. The unemployment rate peaked in June, then declined slowly through the December. Inflation remained modest, and interest rates fell through the year.

Figure 1
Real GDP Growth
Percent change from previous quarter

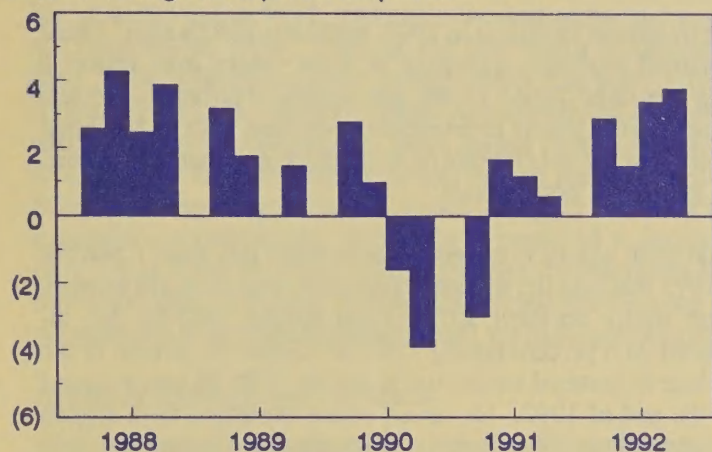


Figure 2
Civilian Unemployment Rate
Percent

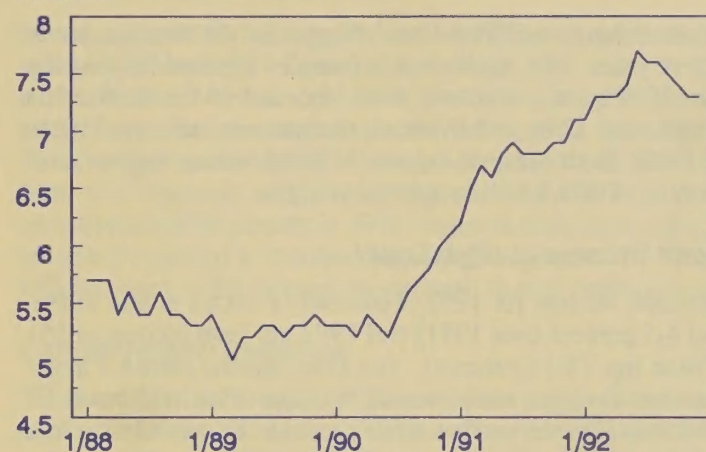


Figure 3
Consumer Price Index
Percent change from year ago

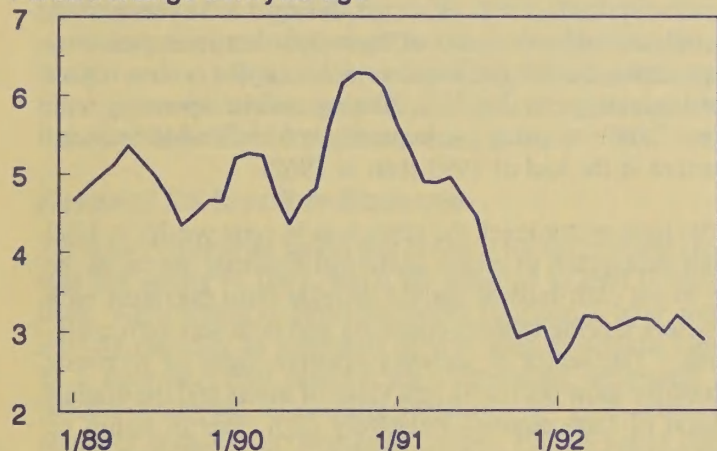


Figure 4
Short and Long-term Interest Rates
Percent

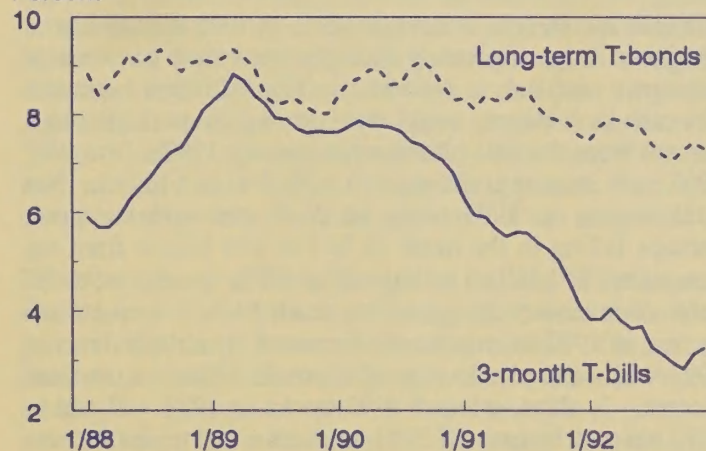


Figure 5
Bank Prime Rate
Percent

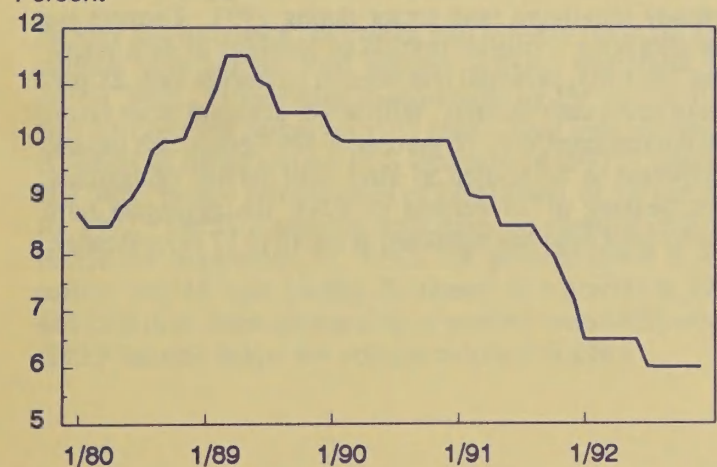
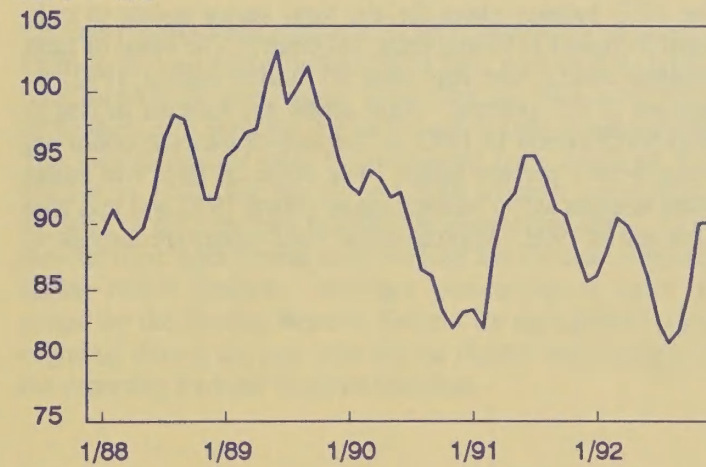


Figure 6
Trade-weighted Exchange Rate
1973 = 100



Stable to Modestly Improving Situation

Adjustments during 1987-90 created a sector much better able to handle adversity. Outlook for 1993 calls for further modest growth in the farm economy.

Lenders have benefited from changes in the farm sector in recent years. U.S. agriculture's finances improved during the late 1980's as a recovery from the earlier financial crisis progressed. Crop and livestock receipts reached record highs in 1990. Both net cash income of \$61.3 billion and net farm income of \$51.0 billion were new highs.

Farm Income at High Level

Net cash income for 1992 is currently forecast at \$60 billion (up 4-5 percent over 1991) and 1992 net farm income at \$51 billion (up 13-14 percent). Net farm income shows a larger increase than net cash income because of an additional \$4 billion in inventories that are expected to be carried over into calendar 1993. This leaves 1992 cash earnings just under 1990's record. The implication of these earnings is that farmers and ranchers have managed to control and actually cut costs after weathering the financial crisis of the early 1980's.

Net cash income could increase some in 1993 in response to continued large marketing receipts, increased government payments, and only a modest rise in production expenses. Net cash farm income could increase slightly, perhaps 1 to 2 percent from the \$60 billion estimated for 1992. However, 1993 cash income could vary from \$58 to \$64 billion. Net farm income in 1993 could be down one-tenth or more, perhaps falling in the range of \$42 to \$48 billion from the near record \$51 billion estimated for 1992. In contrast to the value-of-inventory change adding nearly \$4 billion to net farm income in 1992 as crop stocks increased, by a draw down in 1993 will mean a reduction of about \$3 billion in net farm income. In short, sales of 1992 stocks in 1993 will add to 1993 net cash income. If 1993 production and prices are near the levels currently forecast, the majority of farm businesses will see higher net incomes than during the past few years.

Limited Balance Sheet Growth

The 1993 balance sheet for the farm sector points to only slight increases in assets, debt, and equity. The value of farm business assets rose less than \$5 billion during 1992, an increase of 0.5 percent. Total assets are forecast to rise to \$845-\$855 billion in 1993, as the rate of increase continues in the 0 to 1 percent range. The value of farm real estate assets is expected to be unchanged during 1992 and less than 1 percent in 1993. Nonreal estate asset values are forecast to

rise by almost \$5 billion in 1993, matching 1992's gain. These sustained moderate increases in asset values may reflect a long-run stabilization of the agricultural economy. The real value of farm assets is projected to decline both in 1992 and in 1993, as the general rate of inflation is anticipated to exceed the growth in asset values.

Total farm equity is expected to increase less than 1 percent in 1993 marking the second consecutive year of slight growth. Farm equity declined 30.5 percent during 1980-86, but increased 24.6 percent during 1986-92. Some 56 percent of the decline in nominal equity value during 1980-86 was restored by the end of 1992. However, recent increases have lagged the general rate of inflation. Thus, real farm equity has generally trended down since peaking in 1980, resulting in a slow erosion of a primary measure of the farm sector's wealth.

The real value of farm assets in 1993 is at virtually the same level that it was in 1962. However, during this 31 year period, the inflation-adjusted level of farm debt has increased over 16 percent. Unchanged asset values, coupled with a higher debt load, suggests that U.S. farming will be operating with higher fixed costs and, consequently, a less flexible financial structure at the end of 1993 than in 1962.

At the farm sector level, the slight loss in rural wealth in 1993 is not anticipated to create additional financial stress, as the rise in net cash income should provide farm operators with sufficient income to meet operating and debt service requirements. The sector is showing positive signs of recovery, despite the slow decline in real value of assets and the gradual erosion of farm equity. Relatively high rates of return on farm equity and assets are expected to continue through 1993. The rate of return on equity from current income is expected to be 3 to 4 percent.

Other measures of financial performance suggest a stable to modestly improving farm sector during 1993. Farmers are now allocating a smaller portion of earnings to debt repayment. In 1983, principal and interest payments took 28 percent of gross cash income. With lower debt and more favorable interest rates, only 16 percent of 1993 gross cash income is expected to be needed to meet debt service obligations. After peaking at 23 percent in 1985, the aggregate farm debt-to-asset ratio has stabilized in the 16 to 17 percent range.

Improvement Continues in 1992

Farm lenders' portfolios benefit from their prudent management and the sustained recovery of the farm sector from the financial stress of the 1980's.

The financial condition of agricultural lenders continued stable to improved in 1992, and some modest additional gains are expected in 1993. Each of the four major institutional farm lender categories--commercial banks, the Farm Credit System (FCS), the Farmers Home Administration (FmHA), and life insurance companies--faces unique challenges, but is in a stronger financial position than during the mid-1980's. Most borrowers remain careful about taking on new debt for expansion, consequently, farm debt is expected to increase only 1-2 percent in 1993. With moderate loan demand and improved loan portfolios, agricultural lenders are focusing on maintaining or increasing market share via high-quality loans.

Lenders Strengthen Position

The position of agricultural lenders in 1992 reflected the overall improvement in the finances of farmers in recent years. Except for the FmHA, all major institutional lender groups continued to experience lower delinquencies, fewer foreclosures, declining net loan chargeoffs, and far less loan restructuring than in the mid-1980's. Although some improvement continues, the general pace of working down delinquencies has slowed. As financial stress declined, financial indicators have approached more normal historical levels, although some have leveled off at levels above those prior to 1980.

Demand for Credit Is Moderate

All lender categories report that demand for agricultural credit was not strong in 1992, while the capacity to lend remained high. Agricultural commercial banks continue to have ample lending capacity as indicated by low loan-to-deposit ratios. FCS long-term real estate loans outstanding decreased 1.5 percent during the year ending September 30, 1992, reflecting constant demand for mortgage credit. FmHA made direct operating loans during fiscal 1992 of \$570.7 million, up 16.5 percent from fiscal 1991. Total FmHA direct obligations (operating, ownership, emergency) increased 12.4 percent in 1992 over 1991, to \$712.2 million.

Among life insurance companies still actively pursuing agricultural investments, total lending activity was about flat during 1992. Outstanding loan volume by the end of 1992 was 22.1 percent below the 1981 peak. Total loan volume of commercial banks and the FCS increased in 1992. Commercial banks posted volume gains of \$2.0 billion, or 3.9 percent, for 1992. The FCS reported total loans outstanding of \$52.4 billion on September 30, 1992, 1.8 percent above a year earlier. FmHA total lending decreased 10.6 percent in 1992 and total farm loans outstanding at yearend were 44.6 percent (\$10.9 billion) below the volume reported in 1985.

Farm Interest Rates Decline

Interest rates on farm loans declined in 1992 among the major agricultural lenders. Rates on new farm real estate loans declined about 40 basis points while those on new nonreal estate farm loans declined about 190 basis points from 1991. The average interest rate on all outstanding farm debt declined from 11.01 percent in 1982, its highest level since 1960, to an estimated 9.26 percent in 1992. Interest rates on new farm loans are expected to increase slightly throughout 1993. This will be more so for nonreal as opposed to real estate loans.

Lender Health Improves

The financial health of the FCS and commercial agricultural banks continues to improve. FCS net income through third quarter 1992 was \$729 million, up 16.8 percent from a year earlier. The FCS pre-tax operating income (net interest income less other expenses and merger costs) increased 25 percent to \$869 million in 1992 over 1991. FCS net interest margin for the first 9 months of 1992 increased to 2.84 percent compared to 2.54 percent for the same period a year earlier. Agricultural banks reported higher average returns on equity and assets in 1992, and very low rates of net loan chargeoffs. Agricultural bank loan loss provisions remained the same in 1992, reflecting expected continued low loss rates. Performance of agricultural banks continues to approach conditions common before farm financial problems of the early 1980's.

FmHA continues to work through its backlog of delinquent direct loans. Delinquent loans at mid-1992 were down 11.6 percent from the previous year to \$5.2 billion. The rate of loan restructuring increased slightly in fiscal 1992 after FmHA issued new regulations regarding restructuring in response to the 1990 farm bill. FmHA had been unable to restructure new applicants since passage of this bill until new regulations were issued in April 1992. FmHA loan writedowns, writeoffs, and debt settlements of \$1.8 billion were approved through September 1992, up 1.7 percent from last fiscal year.

Lenders report strong competition for high-quality farm loans. Loan-to-deposit ratios inched up to 58.1 percent for agricultural banks in the year ending September 30, 1992, but surveys of bankers still indicate the ratios are below desired levels. The loan-to-deposit ratio has increased from a low of 53.4 percent in 1987, but the current ratio remains much below the high of 68.2 percent recorded in September 1968. Commercial bank agricultural loan demand has firmed somewhat during recent quarters. Average loan-to-deposit ratios reported by the Federal Reserve System for agricultural banks edged up during the past year for the Nation and for eight of the reporting Federal Reserve Districts.

Cautious Optimism Overall for 1993

Farm lenders will be entering 1993 in a guardedly optimistic mood.

Farmers Can Repay Additional Debt

Slightly higher farm sector interest expenses in 1993 should not dramatically strain the increased net cash available. Despite the gradual erosion of real farm equity, farmers should have adequate net cash income to fully meet their debt repayment obligations.

Farm operators appear to be positioned to profitably use additional credit. In research designed to determine the extent to which farm operators are using their capacity to borrow, studies at ERS suggest that net cash income from farm operations could support additional farm debt. Generally, one of the most influential criteria in lenders' evaluations of loan applicants' credit capacity is the amount of income that is available for debt repayment. In applying debt coverage ratios to determine credit limits and maximum loan amounts, lenders effectively allow no more than 80 percent of income available for debt repayments for loan principal and interest payments. This maximum loan payment determines the maximum loan that the borrower qualifies for, given the appropriate loan term and current market interest rate.

Using net cash income from farm operations as the income available for debt repayment, ERS research has analyzed farm operators' use of their debt repayment capacity since 1970. Applying a debt coverage ratio to net cash income from farm operations for each year, the maximum principal and interest payment was determined. The maximum debt that could be serviced by this loan payment was estimated at prevailing market interest rates for a 7-year repayment term. This maximum debt is the largest line of credit that farm operators could obtain in a given year. For the actual level of farm assets, a comparison of the actual farm debt-to-asset ratio with the maximum debt-to-asset ratio that could be supported by the available income provided insight into farmers' use of credit capacity.

Results of this research indicate that farm operators rapidly exhausted their debt repayment capacity during the late 1970's. In 1980-82, the actual debt owed exceeded the amount that operators could service with their farm income. While this was partially due to prevailing high interest rates, farm operators who borrowed to expand found themselves saddled with a critical mass of surplus debt. This problem farm debt worked itself out during the restructuring that took place over the remainder of the 1980's. Incomes in the mid-

to late-1980's supported a higher level of debt, but as land values declined and heavily indebted farmers experienced loan payment problems, lenders were reluctant to extend credit secured by farmland.

Entering the mid-1990's, one of the major positive farm sector economic indicators is derived by comparing the actual debt-to-asset ratio with the maximum supportable by the net cash income from farm operations. While total farm sector debt is about one-half that which could be repaid from current income, it also appears that debt could rise by about 20 percent without producing an uncomfortably high sector debt-to-asset ratio. This is not to suggest that farmers should again dramatically expand borrowing, but only to indicate that the farm sector appears to have the capability to safely use its growing credit reserves.

Credit Tight in Some Instances

Despite the current capacity of the farm sector to handle debt, significant commodity, regional, and other differences exist. In a Nation as large as the United States, weather problems create difficulties for farmers and their lenders in certain locales every year. Certain categories of borrowers also face greater challenges in obtaining credit than others.

According to a report issued by the U.S. General Accounting Office (GAO) on November 25, 1992, (GAO/RCED-93-27) based on a four-State study, credit for agricultural production was generally available for creditworthy borrowers. Information was obtained in Kansas, Mississippi, Montana, and Virginia. Although credit was generally available for qualified borrowers, loan standards were more stringent than in past because of (1) recent problems in the banking and savings and loan industries and (2) rural banks' adverse experience during the agricultural recession of the 1980's.

In all four States of the GAO study, certain types of agricultural borrowers, such as beginning farmers and farmers growing nontraditional crops, were generally considered higher risk and may have been less able to obtain credit. In addition, some officials in Mississippi as well as several studies referred to by GAO expressed concern about the availability of credit for minority farmers in the State. According to State and local officials talking with GAO, beginning farmers often cannot obtain credit because they lack the required equity.

Farm Credit Access Ample for 1993

Total farm debt should increase in 1993. Demand for farm loans continues to be moderate.

Despite an expected slight increase in net farm cash income and very modest asset growth for 1993, borrowing is not forecast to rise substantially. U.S. farm assets (excluding operator households) rose less than \$5 billion (0.5 percent) in 1992 and are expected to rise 0 to 1 percent in 1993 to \$845-\$855 billion. These modest changes suggest a stable farm economy in terms of nominal dollars. But the real value of farm assets is projected to decline once again in 1993 as the general inflation rate is expected to exceed the growth rate in asset values.

Farm Debt Increasing

Total farm debt should increase 1-2 percent in 1993. This will be the third annual increase after 6 successive years of net debt retirement. Outstanding loan volume for commercial banks and FmHA increased last year while life insurance loan volume was flat. Commercial banks experienced a 6.3 percent increase in real estate lending in 1992, marking the tenth consecutive year of gains. Some of the increase is due to continued stringent loan collateral requirements implemented during the farm financial crisis of the mid-1980's. There also has been increased use of revolving lines of credit backed by real estate.

Activity in the land market should create moderate demand for mortgage loans. U.S. farmland values increased 1 percent in 1991, rose an estimated 1-2 percent in 1992, and are expected to change from 0 to 2 percent in 1993. This will make 6 straight years of U.S. farmland value increases, but during the past 4 years the rate of increase has lagged the rate of inflation. Farm real estate debt should increase slightly in 1993.

Demand for nonreal estate loans should remain moderate in 1993. The outlook for farm inputs consumption and expenditure in 1993 will be influenced by energy prices, an expected decrease in row crop acreage, and an anticipated increase in solid seeded crop acreage next year. Farmers are expected to spend between \$144 and \$148 billion in 1993 for agricultural inputs, representing a 1 to 2 percent increase from the estimated 1992 level. Planted acreage of the major crops in 1993 may be slightly less than 1992 levels, which would likely reduce the use of most crop inputs. However, aggregate input expenses likely will remain stable or increase slightly due to higher manufactured input costs.

Sales of farm machinery and equipment turned lower in 1991 and continued sluggish in 1992. The weak sales came from

several factors that outweighed the inducements of lower interest rates, expanded acres, and generally good harvests that normally would induce increases in sales. Nonreal estate debt thus is projected to increase slightly in 1993.

Credit Access Is Ample

Creditworthy farmers should have ample access to loans in 1993, mostly from commercial banks and the FCS, the largest suppliers. Banks' low loan-to-deposit ratios, despite some recent modest increases, provide liquidity to meet increased credit needs. The FCS is offering farm customers competitive interest rates and credit arrangements in an effort to enhance loan quality and expand market share. Total life insurance company lending is expected to be relatively unchanged in 1993.

The availability of direct FmHA loans to family-sized farmers unable to obtain credit elsewhere should be adequate in fiscal 1993. Fiscal 1993 Operating Loan authority, at \$825 million, is down only 2.9 percent from fiscal 1992. Farm Ownership authority, at \$66.75 million, is exactly the same as in fiscal 1992. FmHA's authority to guarantee loans made by commercial and cooperative lenders should also be ample in fiscal 1993. Approximately \$1.57 billion in loan guarantees was issued in 1992, far less than the maximum \$2.48 billion in lending authority available. (The fiscal 1993 guaranteed maximum lending authority of \$2.24 billion is down 9.8 percent from 1992, but even so, only 92.5 percent and 55.9 percent of the respective ownership and operating credit lines were used in 1992.) Demand for loan guarantees in 1993 is not expected to change greatly from 1992.

The outlook for 1993 indicates that competition will continue to remain keen for high-quality farm loans. Trends in the general economy and farm lending competition should help keep interest rates down. The overall mood will generally remain circumspect. Producers continue to be careful in acquiring new debt and lenders are carefully scrutinizing the creditworthiness of borrowers. Farmers who are good credit risks will have no difficulty in acquiring credit in 1993. Lenders will have adequate funds. Commercial banks are watching collateral requirements and placing greater emphasis on the borrowers' ability to repay loans from current income while operating in the more vigilant regulatory environment. Farmers will need to demonstrate adequate cash flow, and some marginal farm operators and beginning farmers will continue to face credit access problems.

Commercial Banks Hold Largest Share of Farm Loans

Farm debt in 1992 increased for the second consecutive year following a 6-year decline.

The distribution of the farm sector's \$139.7 billion total debt, excluding operator households, as of December 31, 1992, is summarized in table 1. Commercial banks account for 37.3 percent of all farm loans, making them the leading agricultural lender, followed by the FCS with 25.2 percent. Individuals and others are estimated to hold 20.9 percent of the total.

Total farm debt at the end of 1992 was \$54.1 billion, or 27.9 percent below its 1984 peak (appendix table 1). Real estate debt in 1992 was 29.7 percent below its 1984 peak and nonreal estate debt was 26.5 percent lower than its 1983 high (appendix tables 2 and 3). The overall paydown in the farm loan portfolio appears to have been driven more by demand than supply. For a variety of reasons, farmers have decided to hold less debt. Large amounts of debt and relatively high interest rates made debt servicing a costly item in the early 1980's. By 1987-90, interest rates were lower, farm income was stronger, asset values were stable, and debt was down. The farm sector entering 1993 is more cost-efficient and better capitalized.

Commercial Banks Continue To Increase Market Share

Within the real estate debt portfolio, the value of outstanding real estate loans held by commercial banks has increased 91.1 percent since 1984 (appendix table 2). Some of the increase resulted from higher loan collateral requirements in the wake of the farm financial crisis rather than from new land loans. Collateral requirements shift production loans into the real estate category. It appears that farm credit markets have completed the transition from the collateral-based lending of the late 1970's and early 1980's. Lenders now emphasize the borrowers' ability to repay loans from current income while operating in a more vigilant regulatory environment.

A number of important changes have occurred in the nonreal estate portfolios of the major farm lenders (appendix table 3). By the end of 1988, FCS nonreal estate loans had declined 58.8 percent from their 1981 peak, but they subsequently increased 19.4 percent during 1987-92. At the end of 1987, commercial bank loans had decreased 26.7 percent from their top figure in 1984, but they increased 22.2 percent during 1987-92. FmHA nonreal estate loans decreased 51.0 percent during 1985-92. In 1992, the FCS held 16.2 percent and commercial banks held 52.2 percent of total nonreal estate debt. The comparable figures in 1981 were 25.4 and 37.3 percent respectively.

Delinquencies and Chargeoffs Continue at Lower Levels

During 1983-92 FmHA had the highest delinquencies in terms of both dollars and share of the portfolio (table 2). The total value of delinquent loans peaked for commercial banks in 1985 and for the FCS and life insurance companies in 1986. Delinquencies as a percentage of outstanding farm loans peaked in 1986 for all lenders except FmHA, which peaked in 1988.

A key concern of farm lenders is the amount of loan losses they must absorb. Losses for commercial banks, FCS, and FmHA for 1983-92 are shown in table 3. During 1985-89, agricultural loan chargeoffs by these lenders totaled \$13.8 billion. The varying pattern of losses reflects institutional, accounting, and regulatory differences. Commercial banks tend to focus on farm production loans, where problems surfaced more quickly than for the farm mortgages that dominate FCS's loan portfolio. Moreover, until 1985 the FCS tended to extend more loan forbearance than commercial banks.

Another factor in the difference is writeoff timing between FCS and commercial banks may be Federal bank regulators' March 1986 policy initiative, which assists banks with losses in the farm and energy sectors. The change in how renegotiated debt is reported is an incentive for bankers to work with cash-strapped borrowers. FmHA exercised liberal loan foreclosure forbearance into 1985, which resulted in low farm loan losses being reported by the agency. FmHA's policy of considerable forbearance continued in 1986 and 1987 because foreclosure activities were restricted by Congress and the courts. The outcome was low reported loan losses, but an accumulating amount of delinquent loans.

Beginning in fiscal 1987, FmHA began to resolve more vigorously the delinquent loan volume that accumulated during the 1980's. The Agricultural Credit Act of 1987 gave FmHA extensive guidelines to resolve its problems. FmHA has the authority to foreclose on delinquent loans if a complex set of restructuring rules, including partial forgiveness of principal and interest, fails to assist the borrowers.

Farmers and lenders continue to exhibit restraint in incurring debt to purchase land and replace machinery and equipment in the current cautious financial environment. Farm lenders have been reluctant partners in resolving the farm financial crisis of the 1980's. Total farm debt (excluding households) declined \$56 billion during 1985-91 and \$21 billion of this decrease can be attributed to loan charge-offs taken by lenders.

Table 1--Distribution of farm debt, excluding operator households, by lender, December 31, 1992 1/

Lender	Type of debt		Total
	Real estate	Nonreal estate	
Percent of total			
Commercial banks	13.2	24.1	37.3
Farm Credit System	17.7	7.5	25.2
Farmers Home Administration	4.6	5.2	9.7
Life insurance companies	6.8	---	6.8
Individuals and others	11.5	9.5	20.9
Commodity Credit Corporation	2/	---	2/
Total	53.7	46.3	100.0

1/ Preliminary. Due to rounding some subcategories may not add to totals. 2/ \$2 million or 0.0014 percent of total debt. This includes CCC storage and drying facilities loans, but excludes CCC crop loans.

Table 2--Delinquent farm loans, by lender, 1983-92

Lender	Yearend 1/									Mid-year 1992 2/
	1983	1984	1985	1986	1987	1988	1989	1990	1991	
Billion dollars										
Commercial banks 3/ 4/	1.5	2.1	2.6	2.2	1.4	1.0	0.7	0.6	1.1	1.2
Farm Credit System 5/	1.3	2.1	5.3	7.1	5.2	3.3	2.6	2.5	2.2	2.1
Life insurance companies 6/	1.0	1.2	1.7	1.8	1.3	.8	.4	.4	.4	.5
Farmers Home Administration 7/	11.0	12.1	11.9	12.0	11.8	12.5	11.1	8.1	7.3	7.3
Percentage of outstanding loans										
Commercial banks 3/ 4/	3.8	5.2	7.3	7.0	4.8	3.3	2.3	1.9	3.2	3.3
Farm Credit System 5/	1.8	3.3	8.7	14.4	9.9	6.5	5.0	6.1	5.4	5.0
Life insurance companies 6/	8.3	9.6	15.1	17.0	14.3	8.9	4.7	4.2	3.8	5.5
Farmers Home Administration 7/	43.9	45.9	41.5	42.9	45.8	49.8	47.8	41.3	41.7	46.1

1/ End of fiscal year (Sept. 30) for the Farmers Home Administration (FmHA) and end of the calendar year (Dec. 31) for the other lenders. 2/ June 30. 3/ Delinquencies were reported by institutions holding most of the farm loans in this lender group. Data shown are obtained by assuming that the remaining institutions in the group experienced the same delinquency rate. 4/ Farm nonreal estate loans past due 90 days or more or in nonaccrual status, from the reports of condition submitted by insured commercial banks. 5/ Data shown are nonaccrual loans and exclude loans of the Bank for Cooperatives. The Farm Credit System also reports "other high-risk loans," but not all such loans are delinquent. 6/ Loans with interest in arrears more than 90 days. 7/ The FmHA data reflect the total outstanding amount of the loans that are delinquent (as do the data shown for other lenders), rather than the smaller amount of delinquent payments that is often reported as FmHA "delinquencies."

Sources: American Council of Life Insurance, Board of Governors of the Federal Reserve System, The Farm Credit Council, and Farmers Home Administration.

Table 3--Farm loan losses (net chargeoffs), by lender, 1983-92

Year	Commercial banks 1/	Farm Credit System 2/	Farmers Home Administration 3/	Exhibit: Life insurance company foreclosures 4/
Million dollars (Percent of loans outstanding at end of period) 5/				
1983	NA	8 (0.0) 6/	77 (0.3)	247 (1.9)
1984	900 (2.3)	428 (0.5)	128 (0.5)	289 (2.5)
1985	1,300 (3.3)	1,105 (1.6)	257 (0.9)	530 (4.8)
1986	1,195 (3.4)	1,321 (2.3)	434 (1.5)	827 (7.9)
1987	503 (1.6)	488 (0.9)	1,199 (4.3)	692 (7.5)
1988	128 (0.4) 7/	413 (0.8)	2,113 (8.4)	364 (4.0)
1989	91 (0.3)	(5) (0.0) 9/	3,297 (12.4)	204 (2.3)
1990	51 (0.2)	21 (0.04)	3,199 (13.5)	85 (0.9)
1991	105 (0.3)	47 (0.09)	2,289 (10.4)	95 (1.0)
1992 8/	34 (0.0) 6/	(13) (-0.02)	1,887 (9.1)	108 (1.3)

NA = Not available. 1/ Calendar year data for nonreal estate loans. 2/ Calendar year data. 3/ Fiscal year data beginning October 1. Includes data on the insured (direct) and guaranteed farm loan programs. 4/ Loan charge-off data are not available for life insurance companies. 5/ Loan loss data rounded to nearest million dollars. 6/ Less than 0.05 percent. 7/ Does not include losses under the deferred loan program initiated in the fourth quarter of 1987. Beginning during that quarter small banks with more than 25 percent of their loans to agriculture in farm-dependent areas have been allowed (after regulatory approval) to amortize loan losses over a 7-year period. As of June 30, 1990, 29 banks reported more than \$8.9 million in agricultural loan loss deferrals. 8/ Commercial bank data through June 30, 1992, and Farm Credit System and life insurance company data through September 30, 1992. 9/ A gain of less than 0.01 percent.

Sources: American Council of Life Insurance, Board of Governors of the Federal Reserve System, The Farm Credit Council, and Farmers Home Administration.

Agricultural Banks Continue Strong Performance

Farm banks are healthy, liquid, and in position to continue their current leadership among farm lenders.

Agricultural banks are among the strongest institutions in the commercial banking system. Annualized mid-1992 results indicate a rate of return on assets (ROA) of 1.3 percent at agricultural banks, well above their low of 0.4 percent in 1986 and the current industry average of 0.9 percent.

ROA reflects improved loan quality in farm bank portfolios, where only 1.8 percent of loans were in nonperforming status at midyear, down from 4.7 percent in 1986 (table 4). This was substantially better than the industrywide rate of 3.5 percent. In both ROA and loan quality, agricultural banks outperformed the small nonagricultural banks to which they are often compared.

Loan-to-deposit ratios at agricultural banks were up at mid-year 1992. The increase left farm bank loan-to-deposit ratios at 57.0 percent, and with ample capacity to extend additional credit.

What Is an Agricultural Bank?

The two most common definitions of an agricultural bank are those of the Board of Governors of the Federal Reserve System (FRB) and the Federal Deposit Insurance Corporation (FDIC). The FRB classifies banks as agricultural if their ratio of farm loans to total loans exceeds the unweighted average of the ratio at all commercial banks on a given date (16.99 percent on June 30, 1992). The FDIC criterion is a 25-percent ratio of agricultural loans to total loans. As of June 30, 1992, there were 3,971 agricultural banks under the FRB definition and 3,146 by the FDIC definition (table 5).

Agricultural bank numbers peak at midyear due to seasonality in farm loan demand and then decline as loans are paid down. From June 1991 to June 1992, the number of FRB farm banks dropped by 106 (2.6 percent) while the FDIC figure dropped by 19 (0.6 percent). Unless otherwise indicated, the FRB agricultural bank definition is used throughout this report.

Although the number of farm specialty banks declined during the year ending June 30, 1992, commercial bank lending to agriculture grew. Commercial bank farm loans increased 4.9 percent with increases of 3.1 percent in nonreal estate debt and 8.2 percent in real-estate-secured debt. The agricultural bank share of total commercial bank farm debt decreased by almost 3 percent, to 57.1 percent.

Farm Loan Quality Is High

Overall, the quality of commercial bank farm production loans was good. Only 2.3 percent of such loans at all banks (\$822

million) was in nonperforming status, as compared to 2.2 percent last year. An additional 0.8 percent (\$278 million) was reported as renegotiated and performing, down 26 percent from a year earlier. Loan quality was higher at agricultural banks, which reported 1.8 percent of farm production loans nonperforming, with another 0.5 percent renegotiated and performing.

Net chargeoffs of farm nonreal estate loans for all banks decreased to \$37 million from \$38 million from the previous year and represented 0.1 percent of such loans at farm banks. Agricultural bank loan loss provisions remained constant at 0.4 percent, reflecting management's expectation of similar loss rates in the future (table 6).

Profitability Excellent, Capital Strong

Agricultural bank profits were excellent, with ROA at 1.3 percent (a good long-run level) and rate of return on equity (ROE) at 13.3 percent, both annualized from midyear figures. The ROE measure, up from 11.4 percent a year earlier, was consistent with the increase in bank industry earnings, attributable to wider net interest margins due to a lower cost of funds. Agricultural banks outperformed their small nonagricultural counterparts, which achieved an average ROA of 1.0 percent and a ROE of 12.1 percent. Both bank types remained highly capitalized. Farm banks had a capital-to-asset ratio of 10.5 percent, on average, while the small nonfarm banks' ratio stood at 9.5 percent.

Loan-to-deposit ratios for the two bank groups moved in opposite directions. Agricultural bank loan-to-deposit ratios increased to 57.0 percent, but are still lower than desired by bank management. This compares to 65.8 percent at small nonagricultural banks. The ratio of loans to assets sheds some additional light on relative bank liquidity. The average loan-to-asset ratios stood at 50.1 percent and 57.5 percent, respectively, for the two groups. Thus, agricultural banks retained substantially more liquidity, allowing them to respond to any increase in credit demand.

The improvement in farm bank loan quality was reflected in the continued decline in the number of failed farm banks. Only 7 agricultural banks failed in 1992 (appendix table 8), down from 10 a year ago. An additional 13 agricultural banks were listed as weak at midyear, the same number as last year. Total nonagricultural bank failures also fell from a year earlier to 93. Only 66 nonfarm banks were classified as weak, and the number of weak large banks fell to 5 from 6 a year ago, reflecting the improved performance of the industry as a whole.

Numbers of farm banks are down regardless of how they are defined. Having dealt effectively with bad loans, they are now quite healthy, with the capacity to service creditworthy borrowers.

Table 4--Nonperforming loans as a percentage of total loans by type of bank, 1985-92 1/

Type of bank	June 30, 1985	June 30, 1986	June 30, 1987	June 30, 1988	June 30, 1989	June 30, 1990	June 30, 1991	June 30, 1992
---Percent---								
Agricultural								
Total nonperforming 2/	4.1	4.7	3.8	2.7	2.3	2.0	1.9	1.8
Past due 90 days 3/	1.6	1.6	1.2	.8	.7	.6	.6	.6
Nonaccrual	2.5	3.1	2.6	1.9	1.5	1.3	1.3	1.2
Nonagricultural 4/								
Total nonperforming 2/	2.3	2.6	2.5	2.2	2.1	2.0	2.3	2.0
Past due 90 days 3/	.9	1.0	.8	.7	.7	.6	.7	.5
Nonaccrual	1.4	1.6	1.7	1.5	1.4	1.4	1.6	1.5

1/ Data are weighted by bank asset size. 2/ Columns may not equal totals due to rounding. 3/ Still accruing interest. 4/ Banks with less than \$500 million in assets which were not agricultural by the FRB definition.

Sources: Johnson, James, Emanuel Melichar, and C. Edward Harshbarger, "Financial Condition of the Farm Sector and Financial Institutions," paper presented at the symposium on Financial Stress in Agriculture Issues and Implications, Kansas City, MO., Nov. 24, 1986, and calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Table 5--Number of agricultural banks by definition, 1984-92 1/

Item	1984	1985	1986	1987	1988	1989	1990	1991	1992 2/
Commercial banks	14,410	14,283	14,008	13,505	Number 12,961	12,635	12,270	11,849	11,617
Agricultural banks (FRB)	4,987	4,847	4,704	4,480	4,337	4,180	4,067	3,952	3,971
FRB farm loan ratio (Percent)	16.97	16.14	15.78	15.60	15.73	15.84	15.94	16.57	16.99
Agricultural banks (FDIC)	3,922	3,682	3,516	3,335	3,236	3,172	3,090	3,116	3,146

1/ Includes domestically chartered, FDIC-insured commercial banks with deposits, assets, and loans. 2/ 1992 figures are for June 30, all others are December 31.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System (FRB).

Table 6--Selected bank performance measures by type of bank, 1985-92 1/

Performance measure	1985	1986	1987	1988	1989	1990	1991	1992 2/
Percent								
Rate of return on equity capital								
Agricultural banks	6.0	5.1	7.6	10.0	10.7	10.7	11.4	13.3
Nonag small banks	11.0	8.3	8.1	8.7	10.1	8.5	9.1	12.1
Rate of return on total assets								
Agricultural banks	.5	.4	.7	.9	1.0	1.0	1.0	1.3
Nonag small banks	.8	.6	.6	.7	.8	.7	.7	1.0
Provisions for loan losses as a percent of total loans								
Agricultural banks	2.4	2.4	1.4	.8	.7	.5	.5	.4
Nonag small banks	1.0	1.3	1.0	.9	.8	1.0	1.0	.8
Capital as a percent of assets								
Agricultural banks	9.6	9.5	9.8	10.0	10.1	9.9	10.1	10.5
Nonag small banks	8.5	8.4	8.8	8.8	9.0	9.0	9.2	9.5

1/ Rate of return on equity is net income after taxes as a percent of the average of total equity capital at the beginning and end of the year. Rate of return on total assets is net income after taxes as a percentage of total assets on December 31. 2/ 1992 ratios are June 30 data, annualized.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Small Banks Dominate Agricultural Lending

Agricultural specialty banks still hold over half of farm loans, but large nonagricultural banks play an important role.

Agricultural commercial banks held 54.1 percent of all commercial bank agricultural loans as of June 30, 1992, down from 56.7 percent a year earlier. These relatively small specialty banks retained high levels of liquidity and were well positioned to extend additional credit. They do, however, face significant competition from other commercial banks (table 7). Larger banks often hold higher levels of farm loans, but these represent a small proportion of their total loan portfolios. Nearly one-quarter of all commercial bank farm debt is held by the largest class of nonagricultural banks. However, their share of farm debt fell one percentage point last year to 23.2 percent.

Some bank specialists argue that \$100 million in assets is the minimum amount for long-run efficiency and that smaller banks are therefore at risk. Banks under this size hold 53.6 percent of all commercial bank farm debt. The average dollar amount of farm loans held per bank is quite small, reflecting the local lending commitment of these banks. Their knowledge of individual borrower credit risk enables them to serve the small farmer/borrower.

Small Banks Have Higher Capital, Lower Loan Ratios

Bank capital reduces risk of bank failure by cushioning losses and supports liquidity by maintaining borrower confidence, allowing the bank continued access to financial markets. At mid-1992, the smallest banks' equity capital ratio was 151 percent that of the largest banks (table 8). Further, the smallest banks held a much greater proportion (91 percent) of capital in the form of owners' equity than did the largest banks (72 percent). Large banks take advantage of greater leverage to increase returns on equity--and thus take on more risk--while small banks take a more conservative lending approach. Nonperforming real estate loans have eroded the capital of many large banks. Over 5.5 percent of big bank real estate loans were overdue as of June 30, 1992 (appendix table 6).

The difference in bank management approaches between large and small banks is reflected in loan-to-deposit and loan-to-asset ratios. The loan-to-deposit ratio has traditionally been used to measure liquidity. However, changes in financial markets have altered the ratio's interpretation. Some types of loans can now be readily sold, reducing the need to hold securities for liquidity and allowing expansion of loan portfolios.

Expanded markets for nondeposit funds allow banks to alter management strategies through the purchase of funds, especially short-term. Management, adapting to these changes, might expect higher loan-to-deposit and loan-to-asset ratios as well as lower deposit-to-liability ratios. The practicality

of these management strategies is clearly related to bank size, with much wider use among large banks (table 8). This funding approach is more flexible and represents an advantage for large banks over smaller ones in reacting to opportunities.

Mixed Indications of Size, Profit Relationship

Profitability is normally measured by rate of return on assets (ROA) and rate of return on equity (ROE). The smallest banks were significantly less profitable than others except the largest banks as measured by ROA (table 9). ROE showed the same general trend, with peak performance in the \$100-\$300 million class. However, the impact of leverage vaulted the large banks to near the top of the pack in returns-to-equity capital.

The smallest banks, those with \$25 million or less in assets, included 1,626 agricultural banks and 1,093 nonagricultural banks and were the least profitable. The smallest agricultural banks provided about 11 percent of commercial bank loans to agriculture, making their continued profitability a serious concern to farmer/borrowers.

When the smallest class was separated into agricultural and nonagricultural banks, a different and startling profitability picture emerged. The agricultural banks achieved annualized ROA of 1.18 percent and ROE of 11.65 percent--near the top for all banks. However, the smallest nonagricultural banks earned ROA of 0.69 percent and ROE of 6.88 percent at annualized midyear rates. The low profit figures for small nonagricultural banks are partially explained by the existence of newly chartered banks, which generally take at least 3 years to attain profitability, assuming they survive at all. Over the longer run, small banks, which include most agricultural banks, face significant management challenges as a result of deregulation and innovation in financial markets.

Commercial Bank Market Share Trends

Commercial banks have increased their share of non-real estate farm debt from 43.5 percent in 1985 to 52.2 percent in 1992. However, the increase in commercial bank share was not evenly distributed across the country. This becomes evident when market share figures for commercial banks and Farm Credit System institutions are examined for each of the 12 FCS districts. The largest increase in commercial bank market share between 1985 and 1992 occurred in the Columbia and Jackson districts, which had previously had a fairly low market penetration by commercial banks. Of the 12 FCS districts, all but Springfield experienced an increase in commercial bank share during this period. Between 1985 and 1992, the FCS lost market share in all but two districts, Springfield and Baltimore. Its largest losses were in the Jackson and St. Louis districts.

Small banks still lead in farm lending. They are highly profitable and well-capitalized.

Table 7--Agricultural lending of agricultural and nonagricultural banks by bank size, June 30, 1992 1/

Total assets	Agricultural banks					Nonagricultural banks				
	Banks	Total ag loans	Avg. ag loans 2/	Ag lending share 3/	Ag loans/total loans	Banks	Total ag loans	Avg. ag loans	Ag lending share 3/	Ag loans/total loans
	No.	---Mil. dol.---	---	---Percent---	---	No.	---Mil. dol.---	---	---Percent---	---
Mil. dol.	No.	---	Mil. dol.---	---	Percent---	No.	---	Mil. dol.---	---	Percent---
under 25	1,626	5,948	3.7	10.8	47.8	1,093	433	0.4	0.8	4.4
25 - 50	1,282	9,571	7.5	17.4	41.9	1,764	1,292	0.7	2.3	3.6
51 - 100	791	9,573	12.1	17.4	36.1	1,943	2,719	1.4	4.9	3.6
101 - 300	261	5,710	21.9	10.4	29.7	1,855	4,688	2.5	8.5	2.6
301 - 500	7	355	50.7	0.6	26.1	378	1,609	4.3	2.9	1.8
over 500	4	440	110.0	0.8	20.2	613	12,783	20.9	23.2	0.9
Total	3,971	31,597	8.0	57.3	37.4	7,646	23,524	3.1	42.7	1.4

1/ Figures are weighted within size class. 2/ This represents the average size of the loan portfolio for banks in each class. 3/ This represents the percentage of total commercial bank agricultural loans held by this size group of banks.

Table 8--Selected commercial bank solvency and liquidity ratios by bank size, June 30, 1992 1/

Total assets	Comm. banks	Capital to asset 2/	Equity to asset	Loan to deposit	Loan to asset	Deposit to liability
Million dollars	No.	-----Percent-----				
Under 25	2,719	11.1	10.1	57.7	50.9	98.2
25 - 50	3,046	10.4	9.5	59.7	52.9	97.9
51 - 100	2,734	9.9	9.1	60.2	53.3	97.4
101 - 300	2,116	9.5	8.5	65.0	56.9	95.7
301 - 500	385	9.1	8.0	71.4	61.0	92.6
over 500	617	9.3	6.7	82.1	52.5	66.6
Total/Avg.	11,617	9.4	7.2	77.0	53.3	73.7

1/ Weighted average within size class. 2/ Total capital includes equity capital.

Table 9--Selected commercial bank profitability and efficiency measures by bank size, June 30, 1992 1/

Total assets	Return on assets 2/	Return on equity 3/	Asset utilization 4/	Noninterest income to total income	Interest expense to total expense	Interest expense to interest income
Mil. dol.	-----Percent-----					
under 25	0.98	9.66	8.87	9.25	51.04	46.68
25 - 50	1.10	11.50	8.93	10.34	52.03	46.80
51 - 100	1.12	12.42	8.89	10.29	52.91	46.94
101 - 300	1.02	12.86	8.96	11.81	51.75	46.38
301 - 500	1.02	12.70	9.06	13.24	50.54	45.83
over 500	0.86	12.70	9.59	22.35	50.28	51.42
Average	0.90	12.58	9.44	19.79	50.63	50.15

1/ All ratios are on an annualized basis and weighted within class size. 2/ Rate of return on assets is net income after taxes as a percentage of total assets. 3/ Rate of return on equity is net income after taxes as a percentage of total equity. 4/ Asset utilization is gross income as a percentage of total assets.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Farm Credit System Finances Continue To Strengthen

A favorable interest-rate environment enhance the Farm Credit System's recovery. The Safety and Soundness Act of 1992 clarifies repayment procedures and obligations for assistance to the system. St. Paul and St. Louis district banks merge.

The Farm Credit System (FCS) entered 1993 in strengthened financial condition. Loan volume and quality have improved and have earnings and earnings quality. Capital levels continue to rise. Nonperforming assets, though still high, continue to work their way through the portfolio.

After suffering substantial losses in loan volume in the mid-1980's, the FCS has started a nominal recovery in volume (table 10). However, the composition of the loan portfolio has changed. In 1986, long-term real estate loans composed two-thirds of the FCS portfolio and loans to cooperatives 13 percent. By 1992, the portfolio share of long-term real estate loans had fallen to 55 percent and that of loans to cooperatives had increased to 23. The share of short- and intermediate-term loans fell to 22 percent in 1992 from 27 percent in 1986.

FCS income surpassed \$800 million for the 1991 calendar year and will likely approach the \$1 billion mark for 1992 (table 11). Since 1990, net income has been dominated by solid operating results led by strong performance in net interest income. This trend continued in 1992 as the decline in the cost of funds outpaced the decline in interest charged on loans and as nonearning assets fell.

Capital adequacy has been a major regulatory concern. By mid-1992, FCS at-risk capital, including loss allowances and the FCS insurance fund, stood at \$8.1 billion or 15.47 percent of loans outstanding (table 12). This exceeded the surplus and loan loss reserves in 1985. All banks have now attained the permanent 7-percent risk-adjusted capital standard.

Nonperforming loans (nonaccrual loans plus accrual loans over 90 days past due) continue to work their way through the FCS portfolio, decreasing steadily both in dollar terms and as a percent of loans outstanding (table 12). At midyear 1992, about 62 percent of nonaccrual loans were current in both interest and principal payments compared to 47 percent at yearend 1989. Thus, overall loan quality has improved as nonperforming loans are a smaller percentage of the total loan portfolio and a larger percentage of nonperforming loans are current.

Despite massive restructuring, the FCS has been unable to improve overall operating efficiency (last line, table 12). Overall operating costs per dollar loaned increased as the loan portfolio shrank and its quality deteriorated in the mid-1980's. Recent improvements in loan quality and continued restructuring may lower per-unit operating costs.

The FCS Safety and Soundness Act of 1992

The FCS Safety and Soundness Act of 1992 addressed several important issues including repayment of financial assistance, resolution of the status of the Jackson Federal Intermediate Credit Bank (FICB), clarification and expansion of FCS lending powers, and fine tuning of the FCS Insurance Corporation. To ensure timely repayment of financial assistance, the act stipulates that all FCS banks must make annual reserves to repay the Treasury for interest it paid on Financial Assistance Corporation (FAC) debt and that assisted banks make annual reserves to redeem FAC debt when it matures. Two assisted banks (Louisville and Omaha) have already made sufficient reserves to repay their obligations. Other provisions address the obligations of institutions leaving the FCS and of banks placed in liquidation.

The status of the Jackson FICB has created a great deal of stress within the FCS. All other districts FICB's merged with Federal Land Banks (FLB's) to form FCB's. The liquidation of the Jackson FLB left the FICB without a merger partner. Although the FCA ordered a merger of the Jackson FICB into the Texas FCB, courts ruled against the order and no voluntary merger has occurred. The act resolves the status of the Jackson FICB by mandating a mediated merger with the Texas FCB unless another FCB agrees to a voluntary merger. The Jackson FICB has signed a letter of intent to merge into the Columbia FCB by October 31, 1993.

The act also clarifies the authority of the Banks for Cooperatives to finance rural water and sewer projects and allows FCS institutions to underwrite municipal bonds for rural communities. The FCS Insurance Corporation (FCSIC) is designated the legal successor to agreements involving the FCS Assistance Board, which dissolved on December 31, 1992. It must install a new and separate three-member board by January 1996; currently it shares the FCA board.

Agribank Merger

In a move expected to enhance efficiency, the St. Paul and St. Louis FCB's merged to form Agribank FCB. The merger should reduce the ratio of overhead to income through streamlining of staff and operating systems. Greater loan portfolio diversification across commodities and geographically should lower loan risk. Agribank posted a charge of \$27.6 million to consolidate operating systems and pay off dismissed personnel. Annual savings of \$10 million in lower overhead costs are expected, and ultimately 150 jobs will be eliminated.

Loan volume increases slightly as loan quality, income, income quality, and at-risk capital continue to improve.

Table 10--Farm Credit System loan volume, by loan type, as of December 31, 1986-91, and September 30, 1992

Loan Type	1986	1987	1988	1989	1990	1991	1992
Billion dollars							
Long-term real estate	39.26	34.35	32.18	30.24	29.42	28.77	28.82
Short and intermediate term	11.56	9.93	9.26	10.02	10.67	11.22	11.50
Loans to cooperatives	7.4	8.22	9.99	10.44	11.08	11.47	12.05
Total	58.22	52.50	51.43	50.70	51.17	51.46	52.37

Sources: Federal Farm Credit Banks Funding Corporation, Farm Credit System Annual Information Statement and Farm Credit System Quarterly Information Statement, various dates.

Table 11--Farm Credit System income statement, as of December 31, 1986-91, and September 30, 1992

Item	1986	1987	1988	1989	1990	1991	1992
Billion dollars							
Total interest income	7.17	5.78	5.82	6.27	6.13	5.51	3.58
Less interest expense	-6.39	-5.27	-5.04	-5.26	-4.89	-3.95	-2.27
Net interest income	0.78	0.51	0.79	1.01	1.24	1.56	1.30
Less provision/plus reversal for loan losses	-1.80	0.20	0.68	0.29	0.04	-0.05	-0.04
Less loss/plus gain on other property	-0.23	-0.01	0.07	0.07	0.03	0.02	0.01
Plus other income	0.13	0.10	0.12	0.15	0.16	0.16	0.17
Less other expense	-0.81	-0.79	-0.74	-0.75	-0.75	-0.79	-0.60 1/
Less debt repurchase	0	0	-0.17	0	-0.04	0	0
Less taxes	0.01	-0.02	-0.04	-0.07	-0.07	-0.09	-0.10
Net income	-1.91	-0.02	0.71	0.70	0.61	0.81	0.73

1/ Includes \$.028 billion in one-time merger implementation costs associated with the Agribank merger.

Sources: Federal Farm Credit Banks Funding Corporation, Farm Credit System Annual Information Statement and Farm Credit System Quarterly Information Statement, various dates.

Table 12--Farm Credit System financial indicators, as of December 31, 1986-91, and September 30, 1992

Item	1986	1987	1988	1989	1990	1991	1992
Percent							
At-risk capital/total loans 1/	9.40	8.41	7.64	10.52	11.95	14.09	15.47
Percent of loans in nonaccrual status or over 90 days past due	13.93	10.95	7.31	5.54	5.39	4.70	4.13
Other expense/total loans	1.38	1.51	1.43	1.47	1.46	1.53	1.48 2/

1/ At-risk capital includes allowances for losses on acquired property and loans, surplus and unprotected borrower stock and participation certificates, and the FCS Insurance Fund. Prior to 1988 all paid in borrower stock and participation certificates are considered protected. 2/ Annualized rate excluding \$.028 billion in one-time merger implementation costs associated with the Agribank merger. The rate would be 1.55 percent with merger costs.

Sources: Federal Farm Credit Banks Funding Corporation, Farm Credit System Annual Information Statement and Farm Credit System Quarterly Information Statement, various dates.

Farm Credit System Performance Varies Among Districts

Loan portfolio quality, net income, and at-risk capital positions generally improve. Assisted districts are performing well.

The FCS institutions that lend directly to farmers include the 10 district FCB's, the FICB of Jackson, and the local lending associations. Combined, these institutions account for about 77 percent of FCS assets. Thus, FCS financial performance tends to mirror the aggregate financial performance of these banks and their associations. However, system-level statistics hide differences in performance among FCS districts. The following compares the combined performance of the district banks (the FCB's and the Jackson FICB) and their related associations for the 9 months ending September 30, 1991, and September 30, 1992.

Total loan volume ranges from \$9.4 billion in the Agribank district to \$1.7 billion in the Springfield district. The Jackson district, which only makes nonreal estate loans, has loan volume of \$0.5 billion (table 13). While aggregate loan volume was stable, the Columbia, Louisville, and Wichita districts experienced modest increases. In the Jackson, and Western districts, loan volume contracted more than 4 percent between September 30, 1991, and September 30, 1992. However, reductions in nonaccrual loans accounted for about three-fourths of the reduction in loan volume in the Western district.

Aggregate nonaccrual loans decreased more than 18 percent for the year ending September 30, 1992. Such loans continued to account for nearly 5 percent of overall loan volume. Three of the 11 districts had ratios of nonaccrual loans to total loans exceeding 5 percent, and 1 district had a ratio exceeding 8 percent. In addition, the Springfield and Baltimore districts experienced substantial percentage increases in their nonaccrual loan volume, although loan quality in these districts continued to be above average. The Columbia, Jackson, Agribank, Western, and Spokane districts each reduced nonaccrual loan volume by more than 20 percent.

Improvements in net income and at-risk capital continue at an impressive rate. At-risk capital measures all resources that can be liquidated without impairing bondholders. Such resources include unprotected borrower stock and surplus as well as allowances for losses on loans and acquired property. All-district net income rose more than 16 percent for the 9 months ending September 30, 1991, compared to the year-earlier period. All-district at-risk capital and the all-district ratio of at-risk capital to total assets increased by more than 9 percent each over the same period.

Although all districts experienced some growth in at-risk capital, two districts did not share the increase in net income (figure 7). Net income declined in the Baltimore and Louisville districts. These decreases can be at least partially ex-

plained by changes in provisions for loan losses or reversals for previously recognized losses. In the Baltimore district, net income fell \$460,000 while the provision for losses on loans increased \$5,638,000. In the Louisville district, decreases in reversals on previously recognized loan losses and in gains on acquired property accounted for 68 percent of the fall in net income. Thus, earnings quality continued to improve in these districts despite declines in reported net income.

The ratio of at-risk capital to total assets is a measure of the cushion between stockholders and bankruptcy. This ratio exceeded 10 percent for each district and averaged nearly 16 percent for all districts. Only the Omaha district failed to increase its at-risk-capital-to-asset ratio over the year. However, the Omaha district maintained a comfortable level of capital.

Assisted Districts Doing Well

Of particular interest is the financial performance of assisted districts. Since 1988, when legislation authorizing financial assistance to distressed FCS institutions was signed, four district banks have received Federal assistance: Omaha, St. Paul, Louisville, and Spokane. On May 1, 1992, the St. Paul bank merged with the St. Louis bank to form Agribank. These banks (including Agribank) were operating under the oversight of the FCS Assistance Board until its sunset on December 31, 1992. The FCS Insurance Corporation is the legal successor to these agreements.

The assisted districts are performing well, both in absolute terms and relative to districts that did not receive assistance. Taken together, assisted districts had no change in loan volume, while decreasing nonaccrual loans by almost 18 percent. Nonaccrual loans as a percent of total loans remains high at just under 6 percent. Of the assisted districts, the Agribank and Spokane districts continue to have the most problems with loan quality.

Assisted districts continue to experience strong earnings growth. However, the quality of earnings has deteriorated somewhat. Net income has increased at assisted districts by over 10 percent, while that derived from reversals of previously recognized losses increased by 18 percent. Finally, the at-risk capital position of assisted districts improved by over 11 percent in absolute value and by over 9 percent relative to assets.

These results indicate assisted districts continue to make impressive progress and that the Assistance Board effectively accomplished its task.

Table 13--Farm Credit System district-level financial statistics

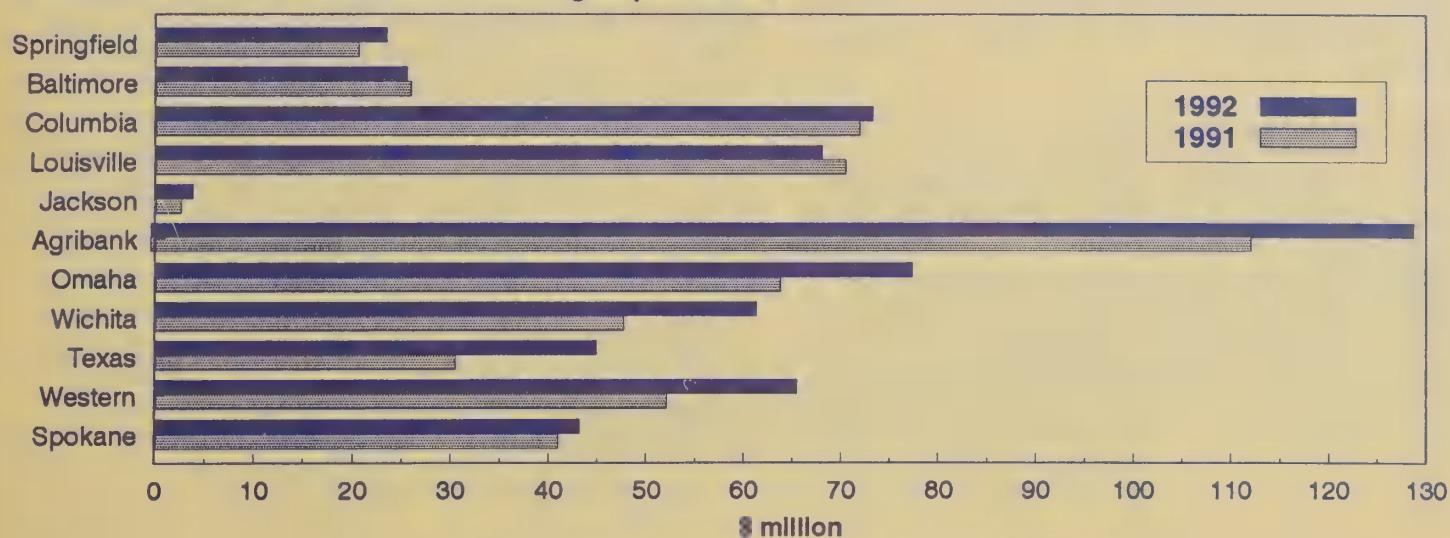
District	Total loans	Nonaccrual loans	Nonaccrual loan share	Net income	Share of income from loss reversals	Total at-risk capital 1/	At-risk capital/assets
	Thousand dollars		Pct.	Thou. dol.	Pct.	Thou. dol.	Pct.
-----Nine months ending September 30, 1992-----							
Springfield	1,743,621	49,132	2.82	23,363	NMF	\$317,656	14.78
Baltimore	3,493,187	110,474	3.16	25,481	NMF	551,011	13.63
Columbia	4,344,172	121,644	2.80	73,258	1.56	925,903	17.93
Louisville	4,047,380	126,519	3.13	68,134	12.45	748,707	17.35
Jackson	548,558	20,367	3.71	3,815	NMF	110,717	17.98
Agribank 2/	9,420,998	593,265	6.30	129,203	5.99	1,667,986	15.66
Omaha	3,944,653	191,468	4.85	77,329	2.64	630,239	13.74
Wichita	3,549,112	125,645	3.54	61,286	3.35	718,111	18.52
Texas	3,729,918	165,694	4.44	44,914	NMF	800,573	18.21
Western	4,948,222	276,493	5.59	65,533	NMF	808,943	14.48
Spokane	2,593,012	252,348	9.73	43,204	1.33	349,053	11.74
All districts	42,362,833	2,033,049	4.80	603,717	NMF	7,633,244	15.79
Assisted districts 3/	20,006,043	1,163,600	5.82	317,870	5.93	3,395,985	15.07
-----Nine months ending September 30, 1991-----							
Springfield	1,731,680	32,677	1.9	20,577	NMF	295,671	13.8
Baltimore	3,380,442	49,124	1.5	25,941	NMF	515,415	13.2
Columbia	4,081,753	178,997	4.4	71,951	NMF	861,640	16.7
Louisville	3,876,882	129,030	3.3	70,514	14.3	672,290	16.0
Jackson	601,641	25,548	4.3	2,642	NMF	106,141	15.8
St. Louis	3,669,531	244,096	6.7	44,463	NMF	585,112	14.3
St. Paul	5,856,471	512,522	8.8	68,118	10.2	903,193	13.7
Omaha	3,896,029	209,227	5.4	63,847	2.1	597,272	14.1
Wichita	3,389,172	129,212	3.8	47,705	16.9	661,923	18.5
Texas	3,818,715	188,148	4.9	30,472	NMF	755,173	16.1
Western	5,202,976	464,564	8.9	52,123	NMF	725,246	12.5
Spokane	2,681,053	319,515	11.9	41,000	3.4	292,191	9.9
All districts	42,186,345	2,482,660	5.9	519,615	NMF	6,988,000	14.6
Assisted districts 3/	16,310,435	1,170,294	7.2	243,479	8.1	2,464,946	13.7
-----Percent change, September 30, 1991 to September 30, 1992-----							
Springfield	0.69	50.36	49.33	13.54	NMF	7.44	7.06
Baltimore	3.34	124.89	117.63	-1.77	NMF	6.91	3.25
Columbia	6.43	-32.04	-36.15	1.82	NMF	7.46	7.12
Louisville	4.40	-1.95	-6.08	-3.38	-13.13	11.37	8.49
Jackson	-8.82	-20.28	-12.57	4.40	NMF	4.31	13.83
Agribank 2/	-1.10	-21.59	-59.12	14.76	330.01	12.07	12.56
Omaha	1.25	-8.49	9.62	21.12	23.43	5.52	-2.66
Wichita	4.72	-2.76	-7.14	28.47	-80.14	8.49	0.16
Texas	-2.33	-11.93	-9.84	47.39	NMF	6.01	12.91
Western	-4.90	-40.48	-37.42	25.73	NMF	11.54	15.65
Spokane	-3.28	-21.02	-18.34	5.38	-60.63	19.46	18.52
All districts	0.42	-18.11	-18.45	16.19	NMF	9.23	8.42
Assisted districts 3/	0.13	-17.73	-17.84	10.39	18.28	11.34	9.15

NMF = No Meaningful Figure. 1/ At-risk capital includes allowances for losses on acquired property and loans, surplus and unprotected borrower stock. 2/ Agribank was formed in May 1992 through the merger of the St. Louis and St. Paul Farm Credit Banks. 3/ Assisted districts included Louisville, St. Paul, Omaha, and Spokane prior to the creation of Agribank. After the creation of Agribank, assisted districts include Agribank (the former St. Louis and St. Paul districts) in lieu of St. Paul. For purposes of comparison, therefore, the St. Louis district is included in the 1991 numbers even though it did not receive assistance.

Sources: Federal Farm Credit Banks Funding Corporation, Summary Report of Condition and Performance of the Farm Credit System, various dates.

Figure 7

District Net Income for 9 Months Ending September 30



Farmers Home Administration Direct Lending and Delinquencies Continue To Decline

Progress continues in decreasing direct lending and restructuring loans.

FmHA's share of agricultural credit continued to shrink in 1992 while new loan volume increased, number of borrowers declined, and volume of bad loans outstanding continued to be reduced. As of September 1992, there were 154,399 direct (insured) farm program borrowers (down 9 percent from 1991), of which 15.8 percent were delinquent, and another 11.1 percent were in foreclosure, collection, or bankruptcy. Outstanding principal on FmHA's direct farm loans also declined \$1.9 billion from mid-1991 to mid-1992. The decline continues to be attributable to reductions in new lending volume, loan restructuring activity, loan writeoffs, and borrowers' hesitancy to increase indebtedness.

Direct farmer loan program obligations for fiscal 1992 (year ending September 30) increased slightly over fiscal 1991 to \$714.5 million (table 14). Operating Loan (OL) program obligations were up \$81 million to \$571 million, while Farm Ownership (FO) program obligations rose to just over \$66 million. Appropriations had been increased for both types of loans, reversing the previous down trend. However, only 67.1 percent of OL appropriations were obligated at fiscal yearend.

Emergency Disaster (EM) program lending receded to \$75 million (12.5 percent of the funds appropriated), down from \$81 million in fiscal 1991. However, weather damage from hurricane Andrew caused over \$1 billion dollars damage in Florida and an additional \$300 million plus damage in Louisiana. Coupled with weather problems that occurred in other parts of the country due to excessive rainfall, applications for damage assistance quickly exceeded the \$600 million dollars appropriated in fiscal 1992. In response, Congress allocated an additional \$162.3 million in fiscal 1993 appropriations to bridge the shortfall in 1992. These monies will show up as outstanding disaster loans at the end of fiscal 1993. Current statute authorizes FmHA to make emergency loans up to \$500 thousand at 4.5 percent interest with terms from 7 to 20 years, 30 to 40 years on dwellings and structures. To qualify, a farmer must have suffered 30 percent or greater losses in the disaster areas.

Loan Delinquencies Diminish

At mid-1992, \$5.2 billion in past due principal and interest payments were delinquent (at least 30 days past due), down 11.6 percent from a year earlier (table 15). While the volume of delinquencies declined, the number of borrowers responsible for those delinquencies increased slightly to 24,371, each having an average 3.5 loans. Outstanding principal delinquent under the EE and EM programs accounted for \$3.7 billion, or 71.2 percent of the total FmHA outstandings delinquent at mid-year 1992 (a 3 percent improvement over

mid-year 1991) (table 16). Many of these loans have been delinquent for over 4 years.

Debt Restructuring Continues

Under rules established by the Agricultural Credit Act of 1987, FmHA continues to restructure loans delinquent for 180 days or more. Restructuring activity is picking up since changes authorized by the 1990 Food, Agriculture, Conservation, and Trade Act have been formalized. In June 1992, FmHA sent out delinquency notices to 30,000 borrowers who were at least 1 year behind in their payments. Delinquent borrowers had 60 days to respond in order to spare themselves the possibility of foreclosure by FmHA.

In fiscal 1992, FmHA processed 282 writedowns for \$49.1 million and processed an additional 664 writeoffs totaling \$168.2 million. The writedowns are subject to recapture under a shared appreciation agreement. Under current regulations, the writeoffs are potentially recapturable under a net recovery buyout agreement.

Loan Writeoffs Remain High

Net writeoffs on FmHA's direct farmer loans decreased to \$1.82 billion in fiscal 1992, down from \$2.2 billion in the previous year. Writeoffs include an acquisition of acquired property loss of \$9 million and gain from the sale of acquired property of \$28 million. The reduced level of losses can be attributed to less foreclosure and debt restructuring activity. Of the writeoffs, two-thirds occurred for loans under the EE and EM programs, and with \$4.1 billion in long-term delinquent debt remaining in these programs, direct loan writeoffs will remain high for the foreseeable future.

Value of Inventory Property Falls

The market value of FmHA farm real estate inventory property was valued at \$382 million as of September 30, 1992, \$23 million below the previous year. There were 506 properties added to inventory, down from the previous fiscal year's 742. The sale of existing inventory property declined to 834 units from the previous year's 1,203, while the average number of months held increased from 41 to 46. FmHA classifies inventory property as suitable or unsuitable for resale depending on whether the property can sustain a viable farming operation. Suitable properties are reserved for FmHA program participants. FmHA has 12 months to lease or sell the property before it is reclassified as surplus and can be sold to anyone. In fiscal year 1992, FmHA had a total of 3,309 properties of which 2,506 had been classified as suitable for lease and resale to other FmHA program participants, but only 417 of the properties sold were classified as suitable.

Table 14--Farmers Home Administration farmer program obligations, September 30, 1985, to September 30, 1992

Year 2/	Obligations 1/				Outstanding principal of farmer programs 3/
	Total	Direct (Insured)	Guaranteed		
			Share of total		
-----Million dollars-----			Pct.	Mil. dol.	
1985	5,927.7	4,753.0	1,174.7	19.8	28,817.5
1986	4,367.5	2,807.9	1,569.1	35.9	29,240.4
1987	3,080.5	1,515.0	1,587.4	51.5	28,147.6
1988	2,320.7	1,065.8	1,271.4	54.8	28,242.6
1989	2,229.6	1,030.1	1,199.5	53.8	26,525.6
1990	2,193.2	921.3	1,271.9	58.0	23,684.0
1991	2,124.1	633.7	1,490.4	69.2	21,992.1
1992	2,306.4	714.5	1,591.9	69.0	20,460.6

1/ Obligations are the dollar amounts of funds loaned or guaranteed. 2/ Fiscal years. 3/ Total outstanding principal balance of loans guaranteed by FmHA and direct or insured FmHA loans at yearend.

Sources: Farmers Home Administration, 616 Report, 4067 Report, and 205 Report, various issues.

Table 15--Farmers Home Administration direct farmer loan program delinquencies, June 30, 1985, to June 30, 1992 1/

Year	Number of active cases 2/ (caseload)			Principal outstanding		
	Delinquent			Delinquent 3/		
	Total	Total	Proportion	Total	Amount	Share of total
	--- Number ---		Pct.	-- Mil. dollars --		Pct.
1985	455,561	165,344	36.3	27,786.3	6,384.8	23.0
1986	429,146	157,391	36.7	27,834.6	6,835.2	24.6
1987	396,910	143,270	36.1	26,252.3	7,005.8	26.7
1988	383,571	151,486	39.5	25,395.7	8,749.7	34.5
1989	353,703	136,847	38.7	23,474.6	8,699.7	37.1
1990	305,551	95,915	31.4	19,926.9	6,665.8	33.4
1991	287,105	88,614	30.8	17,827.4	5,834.0	32.7
1992	257,277	84,083	32.7	15,903.7	5,157.1	32.4

1/ June 30 of year shown to account for the annual cyclical trend in delinquencies. 2/ Duplicated cases because some borrowers have loans under several different programs. 3/ Amount delinquent includes past due principal and interest payments.

Source: Farmers Home Administration, 616 report, various issues.

Table 16--Farmers Home Administration direct farmer loan program delinquencies by program, September 30, 1992

Direct farmer programs	Number of active cases 1/ (caseload)			Principal outstanding		
	Delinquent			Delinquent		
	Total	Total	Proportion	Total	Amount	Share of total
	---Number---		Pct.	--Mil. dollars--		Pct.
Farm ownership (FO)	88,169	16,572	18.8	5,553.4	398.6	7.2
Farm ownership -- nonfarm enterprises	762	151	19.8	29.5	3.2	10.7
Operating loans -- excluding youth (OL)	73,629	26,474	36.0	3,501.3	877.4	25.1
Operating loans -- youth	1,422	111	7.8	5.3	0.5	8.4
Emergency disaster (EM)	56,267	19,440	34.6	4,526.2	2,763.4	61.1
Economic emergency (EE)	22,480	8,747	38.9	1,747.1	729.7	41.8
Recreation	105	24	22.9	6.0	1.1	18.4
Soil and water	9,058	2,138	23.6	167.8	31.1	18.5
Total	251,892	73,657	29.2	15,536.7	4,804.8	30.9

1/ Duplicated cases because some borrowers have loans under several different programs. Active cases do not include loans made to associations.

Source: Farmers Home Administration, 616 report for September 30, 1991.

Farmers Home Administration Guaranteed Lending Grows

Transition to guaranteed loan programs is steady.

Guaranteed loan obligations totaled \$1.6 billion in fiscal 1992, up only slightly from the previous year (table 17), but the third consecutive increase since fiscal 1987. Guaranteed loans accounted for 67.9 percent of FmHA's total farm program obligations, down slightly from the record 69.2 percent in 1991.

Making guaranteed loans is becoming more acceptable, as lenders become experienced in using guarantees and the Farmer Mac secondary market matures. Lenders, however, are still skeptical of any benefits accruing to them from the use of guarantees. Although FmHA has had the statutory authority to guarantee loans since 1972, acceptance by bankers has been slow. Furthermore, FmHA and Congress have been slow to accept credit analysis innovations and loan documentation procedures. Hopefully, this is beginning to change. The advent of a secondary market for these loans has provided an incentive for bankers to participate because of the income-generating potential of selling and servicing the loans. Also, FmHA and Congress are increasingly interested in arriving at a new loan guarantee procedure to curtail paperwork and give more loan making approval to the participating commercial lender. Any new procedure, however, will have to include a mechanism to ensure FmHA remains in the loan appraisal loop.

As of September 30, 1992, FmHA had guarantees on \$4.9 billion in farm program loans. The majority was divided between FO and OL loans. FO loan guarantees were extended to 12,803 borrowers (typically 1 loan per borrower) for over \$1.8 billion, and 28,977 borrowers (several borrowers have multiple loans) had received OL guarantees totaling over \$3.1 billion. As of February 1, 1993, there were 5,753 commercial lenders extending the above FO and OL loans. Only 40.0 percent of guaranteed operating loan appropriations were obligated during the year, but all of the guaranteed farm ownership appropriations were obligated. Guarantee obligations are the amount of loan principal that FmHA has agreed to insure (up to 90 percent of the loan) for repayment to the lender.

Delinquency Rates and Losses Remain Stable

Outstanding principal on guaranteed loans continues to rise, reaching over \$4.9 billion on September 30, 1992 (table 18). Delinquent loan payments represented only 2.1 percent of total guaranteed loan volume at fiscal yearend, up less than 1 percent over last year. As with the direct loan portfolio, emergency loans have the highest delinquency rates among guaranteed loans (table 19). The emergency programs have not been funded since the early 1980's. FmHA losses on

guaranteed farm loans increased in fiscal 1992 to \$63.0 million. Losses suffered on defaulted guaranteed loans remained small compared with losses in direct lending programs.

Outlook for FmHA Programs

In compliance with the Federal Credit Reform Act of 1990, FmHA instituted a consistent basis of measuring and reporting the costs of cash and credit transactions to improve the method of obligating the government's financial resources. Under current law, FmHA program activity is governed by two general accounts. The "program account", covers monies that are actually used to make loans, while the "financing account" is used to manage the projected costs to the government of activity occurring in the "program account". Costs to be accounted for are the estimated differences between FmHA's disbursements and the net present value of the corresponding cash inflows. For program funds to be allocated there must be sufficient "financing" funds available to cover FmHA's costs of making the loans.

FmHA's direct farm loan portfolio should decline steadily in 1993 as more loans are written off and new lending activity is directed towards guarantees. Outstanding volume on direct loans at the end of fiscal 1992 stood at \$15.5 billion. If the trend in paying down loans continues in 1993, yearend volume should be around \$13 billion. Delinquency rates will continue their overall down trend in 1993 even though delinquencies in some categories increased slightly in 1992.

Loan funds for the direct FO and OL programs should be ample throughout fiscal 1993. Annual apportionments for direct FO loans remain at \$66.75 million and direct OL loans are reduced from \$850 million to \$825 million. Direct FO loans were used to near capacity in 1992, but 32.9 percent of direct OL loans were unobligated. An additional \$162.3 million has been appropriated for relief to Florida and Louisiana farmers hard hit by Hurricane Andrew.

Appropriations for guaranteed FO loans not eligible for the interest assistance program remain constant at \$488.75 million, which is consistent with appropriations for fiscal 1992. As in fiscal 1992, no appropriations were made for interest-subsidized guaranteed farm ownership loans. Nonsubsidized guaranteed OL loans are funded at \$1.5 billion dollars which is a decrease of \$300 million from last year. Funding for subsidized guaranteed OL loans increased slightly to \$238.4 million in fiscal 1993. Use of the Interest Assistance program declined to \$31.2 million in 1992 after a sharp increase in the previous year. Funding for this program, however, was increased to \$310 million this year.

The outstanding volume of FmHA's guaranteed farm loans increased \$397 million in fiscal 1992, 8.1 percent over the previous year.

Table 17--Farmers Home Administration major farmer program lending authority and obligations, fiscal 1992

Program	Lending authority 1/	Obligations 2/
-- Thous. dollars --		
Farm ownership (FO)		
Direct	66,750	66,659
Guaranteed	489,250	452,391
Operating loans (OL)		
Direct	850,000	570,737
Guaranteed	1,981,640	1,107,915
Emergency disaster (EM)	600,000	74,883
Interest rate buydown program	300,000	31,166
Guar. Agri. Res. conservation demo loans	10,000	10,000
Credit sales of acquired property	200,000	26,182

1/ Budgetary limits on the volume of new loans that can be issued during the year. 2/ Actual amount of lending authority committed to new loans or loan guarantees.

Source: Farmers Home Administration.

Table 18--Farmers Home Administration guaranteed farmer loan program delinquencies, September 30, 1985, to September 30, 1992

Year 1/	Number of active loans			Principal outstanding		
	Delinquent			Delinquent 2/		
	Total	Total	Proportion	Total	Amount	Share of total
	--- Number ---		Pct.	--- Mil. dollars ---		Pct.
1985	7,160	313	4.4	834.5	19.3	2.3
1986	15,137	723	4.8	1,664.5	31.4	1.9
1987	23,558	1,106	4.7	2,384.0	42.6	1.8
1988	35,746	1,388	3.9	3,177.6	54.1	1.7
1989	38,840	1,733	4.5	3,243.7	60.6	1.9
1990	48,605	1,880	3.9	4,139.8	58.5	1.4
1991	52,299	2,170	4.2	4,526.6	59.3	1.3
1992	55,388	2,746	5.0	4,923.9	102.8	2.1

1/ September 30 of year shown. 2/ Amount delinquent includes past payments of principal and accrued interest.

Source: Farmers Home Administration, 4067 report, various issues.

Table 19--Farmers Home Administration guaranteed farmer loan program delinquencies by program, September 30, 1992

Guaranteed farmer programs 1/	Number of loans			Principal outstanding		
	Delinquent			Delinquent 2/		
	Total	Total	Proportion	Total	Amount	Share of total
	---Number---		Pct.	---Mil. dollars---		Pct.
Farm ownership	13,433	611	4.6	1,818.7	25.5	1.4
Operating loans	41,536	2,049	4.9	3,059.4	69.8	2.3
Emergency loans	1	1	100.0	0.2	0.4	200.0
Economic emergency	404	80	19.8	44.1	6.6	14.9
Emergency live-stock	14	5	35.7	1.4	.5	35.7
Total	55,388	2,746	5.0	4,923.9	102.8	2.1

1/ Emergency, Economic Emergency, and Emergency Livestock guaranteed loan programs are currently not being funded. 2/ Amount delinquent includes past due payments of principal and accrued interest.

Source: Farmers Home Administration, Report 4067 for September 30, 1992.

FmHA Authorized To Initiate Beginning Farmer Program

The Agricultural Credit Improvement Act of 1992 (P.L. 102-554) passed October 28, 1992, authorizes FmHA to establish a beginning farmer and rancher program, modify the operation of direct and guaranteed lending programs, and make other associated changes.

FmHA is directed to establish a program to aid beginning farmers and ranchers and to improve the operation of its other programs. Congressional concerns about the rising average age of the farm population and capital formation problems facing beginning farmers and ranchers coalesced to authorize FmHA to refocus its mission on beginning farmers and ranchers and graduating its direct program borrowers.

Beginning Farmer Definition

To be qualified as a beginning farmer or rancher under this title, the applicant must have operated a farm for 10 years or less, and provided a substantial amount of the day-to-day labor and management of the operation. Furthermore, applicants must agree to participate in farm and financial management training programs established by FmHA. The applicant cannot own land except as a member of an existing family farm corporation. In such case ownership is limited to 15 percent or less of the median acreage of farms in the county where the applicant proposes to operate as reported in the most recent census of agriculture. Finally, the applicant must be able to demonstrate that available resources, including spouse's, are insufficient for the applicant to conduct a viable business enterprise.

Federal-State Beginning Farmer Partnership

FmHA is responsible for notifying each State that the Agency is authorized to enter into a Memorandum of Understanding (MOU) with States that have Beginning Farmer Loan Programs. The MOU assures the State that FmHA will provide either a downpayment loan or a guarantee of the financing provided in the State-level beginning farmer program. FmHA will provide up to a 90 percent guarantee, subject to existing regulations, on loans made under State beginning farmer programs. FmHA has 60 days from the date a request for a MOU is received to conclude a joint agreement governing the provision of financial assistance to be provided by the State and FmHA.

Along with the MOU, the Secretary of Agriculture is to establish an advisory committee on beginning farmers within 18 months. The committee will advise on developing a coordinated assistance program that maximizes new farming opportunities and seeks methods of encouraging States to participate in the program. FmHA reports a number of enquiries from States wanting a MOU even though interim regulations have not yet been released.

Downpayment Loan Program

Within the FO program a new program has been established to make downpayments on farm ownership loans to qualified beginning farmers. Applicants must meet FO eligibility criteria and have been farming at least 5 years but not more than 10 years. The program is intended to facilitate the transfer of farms from retiring farmers to beginning ones. Furthermore, this program will be coordinated with appropriate State programs that provide farm ownership or operating loans. The applicant must be able to make a downpayment of not less than 10 percent of the purchase price from personal resources. FmHA will then loan a maximum of 30 percent of the purchase price, or \$75,000, for 10 years at 4 percent interest. The buyer must obtain other financing on the remaining 60 percent, but FmHA may guarantee the loan under standard guarantee procedures. Types of financing prohibited under this program are: 1) a loan amortization under 30 years; and 2) if the commercial lender contract requires a balloon payment within FmHA's 10-year commitment period. Funds obtained under this program contribute to the limitation of FmHA program aggregate indebtedness. In fiscal year 1994, 55 percent of all insured FO funds will be targeted to this program and by FY 1996, will grow to at least 65 percent.

Special Operating Loan Assistance

An OL program specifically for beginning farmers will be implemented and applicants must meet existing eligibility criteria. In addition, an applicant must have been farming less than 5 years, own or have access to sufficient farm equipment, and participate in borrower training and loan assessment programs.

The applicant must develop a 5-year farm plan describing in some detail how the operation will be conducted, types and quantities of commodities to be produced, methods of production, conservation measures to be undertaken, and expected credit. The plan must show that the operation will be viable for the 5 year period, and that the applicant will be able to graduate at the end of 10 years. The county committee is charged with validating the plan of operation and annual revisions of the plan will be required. FmHA hopes to use some form of financial analysis/budgeting software to make farm plan evaluations more efficient. Failure to achieve the goals of the plan for 2 consecutive years will result in termination unless the reasons for failure were beyond the applicant's control or was immaterial to the overall success of the plan.

Subject to availability of funds and a feasible plan, FmHA must commit to provide eligible applicants operating funds for up to 10 years. Assistance will be guaranteed loans, with interest assistance if necessary. If the applicant cannot obtain a guaranteed loan, an insured loan may be made. After the eighth year of the commitment, the applicant is ineligible to receive an insured operating loan. Approved applicants will also receive necessary loan guarantees for new or improved equipment, and will be given priority in purchasing FmHA's inventoried equipment.

In FY 1994, 30 percent of the insured OL funds will be targeted for beginning farmers for the first 6 months. By 1997, 50 percent of those funds will be targeted. The applicant approved for a loan under this program will be excluded from obtaining a loan under the downpayment loan program or any guarantee for a farm real estate loan for a minimum of 5 years.

Graduation Provisions for Direct Loan Programs

The Agricultural Credit Improvement Act of 1992, takes further steps toward directing FmHA to graduate its direct loan borrowers to guarantees or commercial borrower status. Under the new Act, a borrower is ineligible for insured OL assistance after receiving OL loans for 10 years, and ineligible for guaranteed assistance after 15 years. Existing borrowers can receive insured or guaranteed OL loans for 5 more years, or the remainder of the 10 or 15 year entitlement, whichever is greater. These are lifetime limits.

In conjunction with loan assessment, borrower training, and other provisions, each insured and guaranteed borrower must develop a graduation plan consistent with FmHA guidelines. Each borrower classified as commercial or standard will be reviewed annually, and a prospectus prepared for presentation to a lender. This classification is determined by the FmHA credit scoring model used to evaluate the credit position of its loan portfolio. A guarantee will be issued if the lender makes the borrower a guaranteed loan.

Guaranteed Loan Provisions

The switch from direct to guaranteed lending was made on the assumption that private sector lenders could better evaluate the financial viability of a borrower's farm operation. First authorized in the Food Security Act of 1985 and then further developed in the Food, Agriculture, Conservation, and Trade Act of 1990 and the Omnibus Budget Reconciliation Act of 1990, loan guarantee use was encouraged by elevating the interest rate subsidy available on guaranteed loans, making allowances for partial liquidation by lenders in the event of default, and strengthening the secondary market for these loans. FmHA agrees to guarantee repayment of up to 90 percent of an approved loan made by a qualifying lender.

The Agricultural Credit Improvement Act of 1992 also addressed minor changes in guaranteed lending programs. This Act allows a lender to charge a different rate on the guaranteed and non-guaranteed portions of a loan sold into the secondary market. Furthermore, FmHA is required to develop a simplified application for loan guarantees under \$50,000. The simplified application must be available in electronic media. Furthermore, the simplified application will apply to all guaranteed programs administered by FmHA. The debt service margin requirement is to be based upon depreciation and capital replacement needs, rather than a flat 10 percent. FmHA had been criticized that their previous debt service margin was too optimistic and did not take into account the real burden of replacing capital items.

The Agency is to establish a certified lender program for guaranteed OL loans. Certified lenders will certify to most FmHA requirements, rather than submitting documentation. Certification is contingent upon the commercial lender's willingness to service loans by agreeing to use generally accepted banking standards. Certification will be subject to an annual review of performance. The Agency is to establish a Preferred Certified Lender Program within 2 years. Preferred certified lenders will receive an automatic approval of an 80 percent guarantee if FmHA does not act within 14 days of receipt of a complete application.

Loan Servicing Provisions

Under extraordinary circumstances, State directors can approve acceptance of applications for loan servicing programs beyond the current 60-day limit. The procedure for foreclosure, acquisition, and disposal of FmHA farm loan real estate security within Indian reservations will change. Agency bids at foreclosure must be the greater of the value of the property or the FmHA debt owed against it. In addition, inventory property must be advertised for lease as well as sale.

Other Provisions

The validity of County Committee loan eligibility certifications has been increased to 5 years. Also, the County Committee must take action on a completed application within 15 days. If two or more completed applications are on hand, action must be taken within 5 days. Applicants must be notified of any information needed to complete their application within 10 days of receipt. When an application is still pending 45 days after completion, it must be reported to the district office. Applications not processed within 60 days must be reported individually to the House and Senate Agriculture Committees.

The new legislation calls for interim regulations to be published within 6 months of enactment (April 28, 1993). Final regulations must be issued by October 1, 1993.

Life Insurance Company Farm Loan Portfolios Stable

Loan delinquency and foreclosure levels are steady. The outlook for 1993 is quite favorable.

Historically, agricultural real estate mortgages have been an important life insurance company investment and a key source of farm real estate loan funds. Approximately 22,200 agricultural mortgage loans were held by about 18 life insurance companies on June 30, 1992. During 1992, the quality of agricultural mortgage portfolios of life insurance companies was generally stable.

Delinquencies Have Declined from Mid-1980's Peaks

Delinquency rates based on the number of loans held by life insurance companies were lower for agricultural mortgages than for nonagricultural loans throughout the 1970's. The agricultural delinquency rate surpassed the nonagricultural rate in June 1981 and did so continuously until December 1991. The June 1987 agricultural mortgage delinquency value of 9.12 percent was the highest recorded since the American Council of Life Insurance initiated its survey in 1954. Agricultural loan delinquency has declined to 4.07 percent in June 1992, once again in excess of the rising rate for nonagricultural mortgages (table 20).

The delinquency rates on the volume of loans outstanding are now lower for agricultural mortgages than nonagricultural loans because of the growing problems with urban commercial real estate. The percent of agricultural mortgage debt that is delinquent exceeded the nonagricultural rate from June 1978 until December 1991. The agricultural delinquent share rose to a record 19.85 percent in June 1986 but declined to 5.48 percent by June 1992 when a record 7.35 percent of the nonagricultural portfolio was delinquent (table 20). Some \$462.6 million of life insurance company agricultural mortgage debt was delinquent on June 30, 1992.

Foreclosures Down from Earlier Highs

Agricultural mortgage foreclosure rates by number of loans have exceeded nonagricultural rates since June 1979, and stood at 1.74 percent in June 1992, down from the record 3.91 percent 5 years earlier (table 21). A total of 386 life insurance company agricultural mortgage loans were in the process of foreclosure on June 30, 1992, down from the 1,915 on June 30, 1986.

Agricultural mortgage foreclosure rates by dollar amount of loans outstanding exceeded nonagricultural rates from June 1978 until December 1991. Agricultural foreclosure rates reached record levels in the 1980's (table 21). On June 30, 1986, a record 8.23 percent of the amount outstanding was in the process of foreclosure, but by June 30, 1992, it had declined to 2.45 percent. A total of \$263.8 million in life insurance company farm mortgage loans was in the process

of foreclosure on June 30, 1992, down from \$408.7 million 3 years earlier.

The number and dollar amount of agricultural and nonagricultural loans actually foreclosed during 1980-92 are shown in table 22. Agricultural mortgage foreclosures rose each year of the 1980's until 1986 when they peaked at \$827.5 million. During 1982-85, the dollar amount of agricultural mortgage foreclosures even exceeded that for nonagricultural mortgages. Life insurance company agricultural loan foreclosures during the 1980-90 span totaled \$3.58 billion, with 57.2 percent occurring during 1985-87.

Outlook Is Stable to Generally Favorable

There will be opportunities in 1993 for life insurance companies to make profitable farm mortgage loans, but the competition for the better-quality loans will continue to be keen. Insurance companies will continue to have different views on agricultural lending. Active companies continue to have an ample supply of loanable funds and are aggressively competing on rate, terms, and loan-to-value ratio. Except in areas with weather problems, continued financial progress is expected.

In 1993, life insurance companies will continue to differ in aggressiveness in seeking new loans. Some, stung by earlier problems, will continue to avoid the market and will reduce the existing portfolio as farm loans mature. Other firms will offer funds only for renewals or increases of existing good loans. Some will continue to make loans more for agribusiness and timber activities at the expense of traditional production agriculture lending. The six companies active in the farm loan market will report that available funds exceed qualified agricultural applications.

Total life insurance company farm loans outstanding are projected to be about constant in 1993. Activity on Farmer Mac loans that can be sold out of the company's portfolio may affect total loan holdings. Most of the increased lending will consist of relatively large loans in selected States rather than being distributed evenly nationwide. At yearend 1991 almost half of the outstanding life insurance company farm mortgages were in California, Florida, Oregon, Texas, and Washington.

The life insurance firms currently active in the farm mortgage loan market are big companies with large farm loan portfolios. At present the future level of farm mortgage lending is influenced in a significant way by difficulties faced by the life insurance industry in the commercial real estate market. Commercial real estate makes up about 93 percent of all life insurance mortgage loans in dollar terms.

Life insurance farm loan delinquency and foreclsoure rates are relatively constant while nonfarm rates increase.

Table 20--Life insurance company mortgage loan delinquencies, 1986-92 1/

End of month	Rates by number of loans		Rates by amount	
	Nonagricultural mortgages	Agricultural mortgages	Nonagricultural mortgages	Agricultural mortgages
--- Percent ---				
1986 June	1.33	9.08	1.91	19.85
Dec.	1.64	8.30	2.65	17.01
1987 June	1.46	9.12	2.96	18.01
Dec.	1.60	6.83	2.61	14.31
1988 June	1.53	6.75	2.77	13.27
Dec.	1.74	4.44	2.44	8.87
1989 June	1.55	4.68	2.75	8.65
Dec.	1.68	2.68	2.37	4.74
1990 June	1.87	3.41	2.94	5.26
Dec.	2.10	2.40	3.60	4.22
1991 June	2.30	3.55	5.25	6.35
Dec.	2.66	2.34	5.79	3.84
1992 June	2.87	4.07	7.35	5.48

1/ Delinquent loans (including loans in the process of foreclosure). A delinquent loan is a nonfarm mortgage with interest payments in arrears at least 2 months (60 days if other than a monthly pay) or a farm loan with interest in arrears more than 90 days.

Table 21--Life insurance company mortgage loans in the process of foreclosure, 1986-92 1/

End of month	Rates by number of loans		Rates by amount	
	Nonagricultural mortgages	Agricultural mortgages	Nonagricultural mortgages	Agricultural mortgages
--- Percent ---				
1986 June	.25	3.42	.69	8.23
Dec.	.29	3.84	.84	7.83
1987 June	.37	3.91	1.11	7.98
Dec.	.41	3.02	1.07	6.43
1988 June	.46	3.36	1.16	6.33
Dec.	.45	2.60	1.22	4.83
1989 June	.43	2.35	1.38	4.67
Dec.	.43	1.30	1.29	2.28
1990 June	.46	1.31	1.56	2.23
Dec.	.51	1.13	1.71	1.91
1991 June	.58	1.26	2.39	2.45
Dec.	.68	1.29	2.78	2.24
1992 June	.77	1.74	3.40	3.11

1/ Reporting companies account for approximately 80 percent of the mortgages held by U.S. life insurance companies depending on the date of the survey. Loans in foreclosure include those on which foreclosure action has been authorized, including any involved in a subsequent filing of bankruptcy. Beginning in 1988, the loans in foreclosure category includes loans in redemption period.

Table 22--Life insurance company mortgage loans foreclosed, 1980-92 1/

Year	Nonagricultural mortgages		Agricultural mortgages	
	Number	Thou. dollars	Number	Thou. dollars
1980	549	63,237	26	18,160
1981	552	58,491	47	55,741
1982	760	131,392	167	170,310
1983	868	114,993	306	347,002
1984	1,024	242,428	475	289,251
1985	1,033	328,558	1,000	530,235
1986	1,541	1,143,082	1,654	827,472
1987	2,048	1,580,027	1,515	691,914
1988	1,196	2,530,105	727	364,414
1989	1,098	2,178,949	356	204,361
1990	1,018	3,042,171	122	85,281
1991	1,284	4,942,349	125	94,875
1992 2/	702	3,511,670	33	60,979

1/ Loans foreclosed include those for which title to the property or entitling certificate was acquired during the period shown, either through foreclosure or voluntary conveyance in lieu of foreclosure. Dollar amounts include principal outstanding at the time of the foreclosure, amounts capitalized for interest, foreclosure costs and any advances made to protect the collateral. 2/ January 1 through June 30.

Sources: American Council of Life Insurance, Investment Bulletin, various issues.

Farmer Mac I Development Continues

Three loan pools formed and two poolers were added in 1992.

The Federal Agricultural Mortgage Corporation (Farmer Mac) guaranteed three mortgage pools totaling \$569 million in 1992. Including the first pool guaranteed in 1991, the accumulative value of mortgages guaranteed by Farmer Mac I has now reached \$681 million. All four pools contain farm mortgages, as rural housing mortgages have not attracted the interest of poolers.

All four pools have involved a life insurance company as either an originator, pooler, or both. In May, Chemical Securities assembled \$233 million in loans from The Travelers Life Insurance Company. Prudential Agricultural Credit followed in June with a pool totaling \$238 million and Equitable Agribusiness in October with \$98 million.

The Prudential loan pool was comprised of loans originated by commercial banks over the past 3 years under a correspondent relationship. Prudential and Chemical both used Farmer Mac's linked portfolio strategy (LPS) when selling these pools. Under this financing arrangement, Farmer Mac purchases senior securities or obligations backed by qualified loan pools from the pooler and finances these purchases by selling its own securities. Among other advantages, this structure avoids Security and Exchange Commission (SEC) registration and can offer a more competitive pricing mechanism for poolers because Farmer Mac can take advantage of its agency status in capital markets.

Equitable's loan pool was the first that involved a public sale of SEC registered mortgage-backed securities to investors, carrying a Farmer Mac guarantee of the loan pool. This is the market structure that Farmer Mac had originally been given authority to operate under when it was chartered by Congress in 1987.

One difficulty that Farmer Mac had to contend with in developing the secondary market for farm mortgages that other government sponsored secondary market makers did not, such as Fannie Mae and Freddie Mac in housing, is the 10 percent subordinated participation interest (SBI) requirement. The SBI requirement stipulates that either the originator, pooler, or investor retain a 10 percent interest in the loan to cover losses in case of default. Therefore, if default occurs, the SBI holder must absorb the first 10 percent of the loss before Farmer Mac's guarantee is called upon.

The SBI is a particular problem for commercial banks since regulators require that capital be held against the full value of the farm loan if the 10 percent interest is retained. This requirement greatly lowers the profit potential of a loan sale. In the Prudential loan pool, which was the only pool involving bank-originated loans, whole loans were purchased and securities backed by the SBI portion were sold to investors. For a bank, this approach removes the loan totally from the balance

sheet, relieving it from holding capital, but still allowing it to earn servicing income. A key to future bank participation in Farmer Mac I will be how the SBI is handled by poolers. In other pools, life insurance companies have retained the SBI.

Large Loans Predominate First Pools

The average outstanding principal value of the 2,279 mortgages in the 4 pools is fairly large at \$299,187, but still less than the \$380,874 average of outstanding life insurance company farm mortgages at mid-1992 (table 23). Insurance companies prefer large loans, often \$500,000 or more, because they provide a greater return over fixed originating costs. The largest loan in any pool was \$6.7 million. Perhaps reflecting numerous seasoned mortgages and a preference toward loan contracts with shorter commitments, the average remaining life of loans was about 5 years. Average loan interest rates in the 4 loan pools ranged from 9.81 to 10.26 percent, with a combined average of 10.07 percent.

In aggregate, the distribution of loans in the pools by commodity and geographical location reflect the lending policies and practices of insurance companies. The largest share of loans were to feed grain producers (20.7 percent), growers with permanent plantings (17.1 percent), and cattle producers (13.6 percent). Dairy and all other livestock were the smallest categories, with 2.0 and 2.1 percent shares, respectively.

Geographically, the distribution is particularly close to that of life-insurance-company-held farm and farm related mortgages. For example, at the end of 1991 the Pacific region accounted for the greatest amount (34.6 percent) and the Northeast the least amount (0.4 percent) of insurance company held mortgages. In the Farmer Mac pools, the Pacific region accounted for 36.3 percent of farm mortgages, with the Northeast contributing 0.6 percent. The relatively high concentration of pooled mortgages from one region is somewhat of a concern, but the Pacific region loans are commodity diverse with permanent planting crops (vineyards, citrus, fruits, nuts) accounting for the largest share--about 40 percent of the total.

More Poolers Certified

Travelers Realty Investment Company and the Farm Credit Bank of Columbia S.C. were added to the list of Farmer Mac certified poolers in 1992. This brings to seven the number of certified poolers, of which four are affiliated with life insurance companies and two are securities companies. Two Prudential Insurance subsidiaries are performing under the same certification, and therefore, the actual number of pooling operations that have Farmer Mac authorization is eight.

The addition of the Columbia FCB is important because it signifies the first step toward participation in Farmer Mac by the FCS. In general, the FCS has viewed Farmer Mac as a

competitor and, therefore, has not participated in its development. If the Columbia FCB certification leads to active FCS participation, the shape and growth of Farmer Mac I would be altered.

Financial Needs

Although, Farmer Mac has guaranteed four loan pools and is receiving guarantee fee income from its programs, it will need to more than double outstanding guaranteed loan volume to cover 1993 operating expenses. Farmer Mac collects a 0.25 percent fee on outstanding guaranteed securities. With annual operating expenses running around \$4 million, outstanding volume needs to average roughly \$1.5 billion in 1993 to cover direct operating expenses. Yet, even taking into account the additional volume needed to rebuild capital from earnings, the amount of volume necessary to sustain Farmer Mac is relatively modest given the size of total farm real estate debt. This debt (including operator households) at 1992 yearend was estimated to be \$80 billion.

But a failure to advance in 1993 could raise concerns about Farmer Mac's financial condition, as capital would continue to erode. Start-up costs and accumulative operating losses have whittled the initial capitalization of \$21.6 million to \$13.3 million as of September 30, 1992.

Outlook Mixed

Many of the market conditions confronting Farmer Mac's development in 1991 continued through 1992 and into 1993. These conditions include a relatively weak demand for farm real estate financing, weak demand for longer term fixed rate financing, and excess lending capacity among agricultural lenders. These factors are largely beyond Farmer Mac's control.

When loan demand is weak and banks have excess lending capacity the incentive to sell loans into a secondary market is muted because there is little need for additional lending capacity. Farmer demand for a long-term fixed rate loan product has been dampened by a persistent steeply upward sloping interest rate curve, which has meant that short-term interest rate loans offer farmers lower cost financing than long-term fixed-rate loans. And Farmer Mac still must over-

come unfamiliarity among originators and wait while poolers learn how to best securitize farm loan assets.

Boosting the market's volume this year would be a rise in loan demand brought on by low interest rates; stronger farm income prospects or a rise in short-term interest rates relative to long-term rates, which would encourage farmers to use the longer-term fixed rates offered by Farmer Mac poolers. Participation by Farm Credit System institutions could also spur Farmer Mac growth, but much of the System's members remain disinterested.

Despite the early predominance of life insurance companies in Farmer Mac, further market growth might well hinge on other lenders and poolers. In part, this is because insurance companies generate a relatively small pool of mortgages that qualify for Farmer Mac under the present lending policies and practices. From 1988 through 1991, annual insurance company farm mortgage acquisitions averaged only \$1.5 billion, and much of that came from companies not active in Farmer Mac. Also, many of these mortgages will not meet Farmer Mac's underwriting standards either because of low credit quality or they are made to non-qualifying agribusiness or timber firms. Life insurance companies hold \$10 billion in farm and farm related mortgages.

Therefore, in the absence of major lending policy changes within the insurance industry, a shift in credit demand, or continued packaging of seasoned insurance company mortgages, sustained growth of Farmer Mac I volume will likely have to involve others, either as originators, poolers, or both. At least one life insurance company appears to be exploring ways to operate a pooling operation that obtains loans from a range of non-insurance company originators, especially commercial banks. Progress in this area will have a significant influence on volume growth in 1993.

Farmer Mac's influence on agricultural credit markets will likely continue to develop slowly. While initial evidence suggests that Farmer Mac is flexible enough to offer loan products that are innovative and competitive with those offered through other sources, especially the Farm Credit System, it still faces a highly competitive market.

Table 23--Characteristics of Farmer Mac I loan pools

Pooler	Guarantee date	Number of loans	Total principal	Average		
				Loan size	Interest rate	Maturity date
		No.	--- Dollars ---		Percent	
John Hancock 1/	12/91	512	112,287,347	219,311	9.81	01/11/96
Chemical 2/	5/92	790	233,389,529	296,143	10.03	10/27/96
Prudential 3/	6/92	603	237,928,363	394,574	10.26	10/10/99
Equitable 4/	10/92	374	97,677,004	311,073	10.05	5/1/98

1/ John Hancock Mutual Life Insurance Company. 2/ Chemical Securities, Inc. 3/ Prudential Agricultural Credit, Inc. 4/ Equitable Agri-Business, Inc.

Source: Federal Agricultural Mortgage Corporation.

Farmer Mac II Volume Grows Slowly

Market utilization remains spotty.

The volume of loans sold through the Farmer Mac II market more than doubled in 1992 to \$24 million. Cumulative sales since the market's inception in April of 1991 totaled \$35 million at 1992 yearend. Farmer Mac II sales volume remains small when compared to FmHA guaranteed loan volume. In fiscal 1992, FmHA guaranteed \$1.6 billion in new farm loans and had \$4.9 billion in outstanding farm loan guarantees.

Under the Farmer Mac II program, lenders sell the FmHA guaranteed portion of operating loans (OL) or farm ownership (FO) loans with maturities of 1 year or more (Farmer Mac serves as the pooler for this market). Lenders swap these loans for a marketable security or sell them for cash. If sold for cash, lenders receive the par value of the loan and a "management premium" for the difference between the net yield (the rate investors receive from purchasing the loan or pool of loans) and the contractual loan interest rate the borrower pays. The net yield is determined by Farmer Mac and includes certain transaction and service fees. Interest rate indexes, such as the Prime Rate, U.S. Treasury constant maturity indexes, and Farmer Mac's cost of funds index (COFI) are used to calculate the loan's net yield and hence the lenders management premium. Lenders can also earn loan servicing income.

Regional Use Evident in Early Sales

Through 1992 a total of 250 loans were sold or swapped by 60 lenders or about 2 percent of all lenders with a guaranteed loan. The average guaranteed portion sold was \$140,000. Farm loan guarantees are capped at \$400,000 for OL and \$300,000 for FO qualifying loans. Regional use of the program is evident with eight States accounting for about three-fourths of the loans sold to date. New York and California account for the largest share of numbers sold and volume. The remaining are scattered among 17 States. Some States, such as Louisiana, which have relatively high rates of participation in the guarantee program, are not represented in the sales through 1992.

Loans sold to date carry a range of interest rates that reflect the various loan guarantee dates, terms, and loan purposes. The majority of loans have an original term between 7 and 30 years. Seven years is the maximum term that OL program loans are typically amortized over, but under certain circumstances they can be as much as 15 years. Most loans are now sold by lenders to Farmer Mac II under its linked portfolio strategy program as opposed to swaps or other sales mecha-

nisms. LPS loan contract rates are tied to a Farmer Mac COFI, which have resets between 3 months and 10 years. The COFI, which Farmer Mac creates by selling discount notes, provides a lower base interest rate than other commonly used base rates, such the prime rate.

Commercial banks, which are the primary user of FmHA loan guarantees, continue to be the primary seller of loans. Only a few loans from FCS lenders have been sold into the market. Characteristic of those participating in the loan guarantee programs, banks with less than \$100 million in total assets account for the majority of loans sold into the market. Banks with less than \$100 million in total assets account for roughly three-fourths of bank-originated farm loans guaranteed by FmHA.

Slow Growth Expected

Farmer Mac II offers lenders an opportunity to minimize interest rate risk and increase lending capacity and returns. But despite these opportunities the volume of guaranteed loans sold into the market will likely continue to grow slowly in 1993. This is because many of the same economic conditions impeding development of Farmer Mac I, such as high lender liquidity, also affect the Farmer Mac II market. Moreover, many lenders remain unaware of the advantages of the market or their FmHA guaranteed loan volume is not significant enough to warrant Farmer Mac II sales.

Another factor affecting market volume is the pace of guaranteed lending. Adoption of the guaranteed program by lenders has been rising, but use remains spotty. During fiscal 1992, over one-third of guaranteed funding remained unobligated at yearend. Lenders cite cumbersome paper work and slow approval times on guaranteed loans as impeding wider use of the programs. FmHA is in the process of revamping its guaranteed loan program application process by reducing paperwork requirements and providing faster approval deadlines. To the extent more guarantee use is encouraged, activity in Farmer Mac II would also be enhanced. Of course, any Congressional funding changes would also affect the supply of guarantees for the market.

Volume will also be limited by the fact that the largest amount of guaranteed farm loans are for annual operating expenses, which frequently mature in a year or less. Also, many of these loans are lines of credit, which are not eligible for the secondary market.

State Level Activity in Agricultural Credit Markets Increases

A new Federal-State partnership adds additional incentive for States to target beginning farmer rancher programs for assistance.

A growing number of States operate credit programs to enhance agricultural production. Each program has a specific agenda, targets a specific clientele, and covers a broad spectrum of purposes and approaches. Surveys conducted by the Economic Research Service (ERS), since 1989, identified 34 States with farm credit programs in 1990, up from 24 States in 1987. Survey trends indicate movement toward programs that take expenses off-budget, reduce unexpected costs, and lower expenses. The Agricultural Credit Improvement Act of 1992 (P.L. 102-554) passed October 28, 1992, has increased interest in beginning farmer and rancher programs operated at the State level. By authorizing FmHA to supply down payment loans for real estate purchases, and guarantees for operating and real estate loans, FmHA becomes an effective advocate for increasing State level program activity. State agricultural credit programs are currently less than 2 percent of the Federal level of commitment to agricultural credit.

Program Purpose, Type, and Priorities

Most programs have clear objectives including: 1) financial assistance; 2) improving eligibility for other assistance; 3) assisting "beginning" farmers and ranchers; 4) promoting diversification; and 5) modernization. Programs generally result in costs to the State such as direct money outlays, future financial obligations, assumption of financial risks (which have uncertain outlay streams), or forgone income. Most States find programs more attractive when known costs and uncertainty are low, and program outlays are off budget. Unfortunately, taking costs off budget may be politically desirable, but it does not guarantee budget neutrality. A revolving fund operated by a State-chartered agency, for instance, can keep all costs except for administration or fund replenishment off budget. However, costs taken off budget through tax breaks or other foregone income methods adversely effect revenues. The desire to lower program costs results in closely targeted programs and leveraged State expenditures.

Popular Programs

Popular programs, as discussed here, are limited to types that are currently used in several States and are growing in use. Linked deposit programs use tax revenues that are deposited with approved lenders that, in turn, commit to making loans for particular uses. In turn the lender passes the interest savings on to the borrower by reducing the loan interest rate.

Linked deposit programs are attractive because there is almost no risk and, except for administrative expenses, all costs are foregone income which does not appear on the State's budget.

But, as previously noted, this does not help to balance the State's budget.

Linked deposit programs provide less advantage to borrowers when interest rates are low. This is because the interest rate difference between a subsidized linked deposit loan and a market rate loan is narrowed. In 1990 at least 9 States had active linked deposit programs.

Add-on programs usually piggy-back on existing Federal programs. For example, the State could lower the risk of default on a FmHA guaranteed loan through an interest rate buy-down. It is argued that such programs are easy to administer, have little risk, and take advantage of both borrower familiarity with Federal programs and the larger Federal subsidy. Through the 1992 Agricultural Credit Improvement Act, FmHA has been given extended authority to participate in these programs by providing guarantees and down payment loans.

In 1990, at least eight States had beginning farmer and rancher programs. The rising average age of farmers and the growing cost of acquiring a farm of economical size are issues pushing beginning farmer programs to heightened priority at both State and Federal levels. While beginning farmer programs concentrate on farm real estate loans, assistance for production credit also is often available. Assisting successful entry into farming through credit assistance has a long history as a major policy goal going back to Thomas Jefferson's and Alexander Hamilton's great debate over dividing the Northwest Territory. Jefferson argued for sales in tracts farm families could own and for reasonable accommodations on financing those sales. Jefferson won the debate and consequently the preservation of family farms has guided public agricultural policy ever since.

State beginning farmer programs should be given a boost by the Agricultural Credit Improvement Act of 1992. This act provides for FmHA to either guarantee beginning farmer loans made by States or provide a downpayment for such loans. Final regulations for this Act are required to be out in October 1993.

New crop programs are narrowly targeted at promoting innovation and diversity in the State's agricultural sector, but on a small scale. Most programs encourage the growing of nontraditional crops, which may be new to farmers in one State but are traditional in other areas. New crops also can be seldom grown commercially, or produced in a significantly revised manner. Such programs have generally relied on direct loans and had a small funding level.

Farm Loan Rates Declined Throughout 1992.

Farm interest rates are expected to increase throughout 1993, especially for shorter-term, nonreal estate loans.

Situation: 1992

Interest rates on farm loans declined throughout 1992 (figure 8). Rates on new nonreal estate loans declined on average by 188 basis points (appendix table 4). Rates on new real estate loans declined on average by 89 basis points (appendix table 5). Most of the decline in the farm financial markets were in the shorter-term loans. Figure 9 demonstrates that more farm sector earnings before interest and taxes have been going to farmers rather than farm lenders since 1981. While the ratio has declined, it still exceeds its 1960-75 levels.

Much of the decline in farm sector loan rates reflected declining interest rates for the general economy from 1991 to 1992. The greatest declines were in shorter-term loan rates and reflected the Fed's efforts to stimulate the economy by reducing the discount and Federal funds rates. Six-month U.S. T-Bills, similar to the term of many nonreal estate farm loans, declined from a 1991 average of 5.72 to 3.69 percent in 1992, a 203-basis-point decline. U.S. T-Bonds, a composite series similar in term-to-maturity to real estate loans in the farm sector, declined from a 1991 average of 8.16 to 7.55 percent in 1992, a 61-basis-point drop. This was its lowest annual average since 1980.

In 1992, the premium of farm nonreal estate loan rates over the 6-month U.S. T-Bill rate was 27 basis points below the 1980-91 average premium for large commercial banks, 122 basis points above average for other commercial banks, 138 basis points above average for the FCS, and achieved its greatest magnitude above average for the FmHA. In 1992, the excess of farm real estate loan rates over the U.S. T-Bond series was 100 basis points below the 1980-91 average premium for all commercial banks, 38 basis points below average for the FCS, 18 basis points below average for life insurance lenders, and almost double its average for FmHA.

The bank prime rate declined from 8.47 in 1991 to 6.25 percent in 1992 for a 222 basis point decline. The prime is one of several benchmark rates which banks can use to tailor lending terms to meet needs of individual borrowers. Most prime loans are for less than one year. The premium or excess of the farm nonreal estate loan rate over the prime rate has been generally trending down since the mid-1980's. The 1992 excess of farm nonreal estate loan rates over the prime was 52 basis points below the 1980-91 average premium for large banks, 97 basis points above average for other banks, 141 basis points above for FCS, and 165 basis points above for FmHA.

Outlook: 1993

Interest rates for the general economy are expected to increase modestly throughout 1993. Signs of non-inflationary growth

suggests the Fed will not be pushing short-term rates down in 1992. Foreign investors see the American bond market as more attractive with its relatively lower interest rate volatility and the expected strengthening of the dollar. Hence, foreign demand for U.S. debt should continue to remain strong. A weak labor market, increases in U.S. productivity, and a sluggish global economy should keep inflation in 1993 near 3 percent. Rates in shorter-term loans are expected to increase the most (about 50 basis points) as the U.S. economy expands. Long-term rates (which rely on inflationary expectations) are not expected to change by much in 1993, resulting in a flatter yield curve. Of course, loan rates could rise to a greater extent than expected given an unanticipated increase in inflation.

For the reasons cited above, farm loan rates are expected to increase modestly throughout 1993. Increases will be greatest in the nonreal estate loan rates, about 50 basis points from the first through the fourth quarter. Real estate loan rates are expected to increase by about 25 basis points over the same interval. With only slight increases expected in lender borrowing costs, farm lenders can expect favorable net interest margins throughout 1993.

Commercial Banks

Interest rates on new nonreal estate loans made by large banks declined by 227 basis points in 1992. Interest rates on new nonreal estate loans made by other banks (banks with assets of \$500 million or less) declined by 190 basis points in 1992. The rates are at their lowest point since 1977. Indeed, large banks had the lowest annual rate among farm lenders for nonreal estate loans in 1992 (not including FmHA limited resource). Interest rates on new real estate loans made by all banks declined by 123 basis points in 1992 from its 1991 average. This is the lowest annual average for farm real estate loan rates by commercial banks since the 1970's.

Other banks accounted for roughly 80 percent of the total number of loans made by banks in 1992. Large banks accounted for about 60 percent of the volume of farm loans in 1992. This is because these loans are many times larger than those made by other banks.

The average maturity of farm nonreal estate loans in 1992 was 8 to 9 months. This is about 6 weeks longer than the 1992 average and is at the upper end of the historical range.

Large banks generally give greater weight to the marginal cost of bank funds when pricing farm loans, whereas smaller banks give relatively greater weight to the average cost of loan funds. Marginal cost pricing allow rates to borrowers to rise more rapidly when bank cost of funds is increasing.

Because small banks depend more on consumer deposits and price their loans more on an average cost of funds basis in contrast to large banks, the increase in small bank rates should be less than the increase in large bank rates during 1993.

Almost three-quarters of farm nonreal estate loans were made with floating rates, which are especially popular at the large banks.

Demand for new farm loans rose in 1992 while the growth in demand for renewals and extensions of farm loans declined slightly over the year. Lenders indicated ample loan funds.

Farm Credit System

Interest rates on nonreal estate loans declined from 10.10 percent in 1991 to 8.19 percent in 1992, a 191 basis point decline. Interest rates on real estate loans declined from 9.85 percent in 1991 to 8.25 percent in 1992, a 160 basis point decline. FCS rates on nonreal estate loans continued to rank between large and other bank rates for similar loans. FCS real estate loan rates continued to be made at lower rates than similar loans made by commercial banks and life insurance companies.

One measure of the cost of funds to the FCS is the spread of Farm Credit securities over those issued by the U.S. Treasury. This spread has declined from 60 to 80 basis points in 1988 to about 6 to 7 basis points by November 1992. Improved financial conditions and the Farm Credit Administration's (FCA) strengthened supervisory and examination procedures have been cited by the FCA for two reasons. The FCA estimates its expenses add about \$0.08 to each \$100 of a borrower's loan. The FCA has expressed concern, however, that direct lending associations have been establishing large credit lines through outside financing sources.

Treasuries declined over 1992, reducing loan fund cost. The expected upward shift in the yield curve in 1993 should increase the cost of funds to the FCS. The increase is expected to be greater for shorter-term maturities.

Net interest income--the difference between what a lender collects from borrowers and pays to investors--rose from

\$1,148 million in the first 9 months of 1991 to \$1,303 million for the first 9 months of 1992, mostly due to higher volume in its short- and intermediate-term loans and increased spreads on interest-bearing funds. The increased spreads on interest-bearing funds were due mostly to a reduction in the average interest rate paid on systemwide debt securities by replacing higher cost debt with lower cost debt.

Farmers Home Administration

For nonreal estate (operating) direct loans, interest rates on regular loans declined from 8.25 percent in 1991 to 6.79 percent in 1992. For limited resource loans, rates were unchanged. Limited resource rates were steady over 1992, while regular rates declined in each quarter. The spread between regular and limited resource loans has declined to an all time low of 1.0 percent by the last quarter of 1992.

Farm ownership loans are used to purchase, improve, or refinance farm real estate. For real estate direct loans, rates on regular loans declined 60 basis points from 1991 to 1992. These rates were almost a full 1.5 percent below similar rates offered by other farm lenders. Limited resource interest rates were a constant 5 percent for both years. The spread between regular and limited resource real estate loans was at an all time low (275 basis points) by the last quarter of 1992. Since the emphasis on loan guarantees starting in the mid-1980's, direct real estate lending by FmHA has been drastically reduced, with emphasis on new and socially disadvantaged farmers. Direct loan rates are largely based on the Federal government's cost of funds.

Life Insurance Companies

Interest rates on real estate loans declined from 9.75 percent in 1991 to 9.60 percent in 1992, a drop of 15 basis points. Rates declined throughout the year from a first-quarter high of 9.93 percent to a fourth-quarter low of 9.19 percent. This is the lowest level since the 1970's. Metropolitan Life, The Travelers, Prudential, Equitable (U.S.), and John Hancock make up about 86 percent of total loans outstanding to farmers made by the life insurance industry by the beginning of 1992. However, farm mortgages represent a very small proportion of the insurance industry's total assets.

Figure 8--Selected Interest Rates, Selected Years

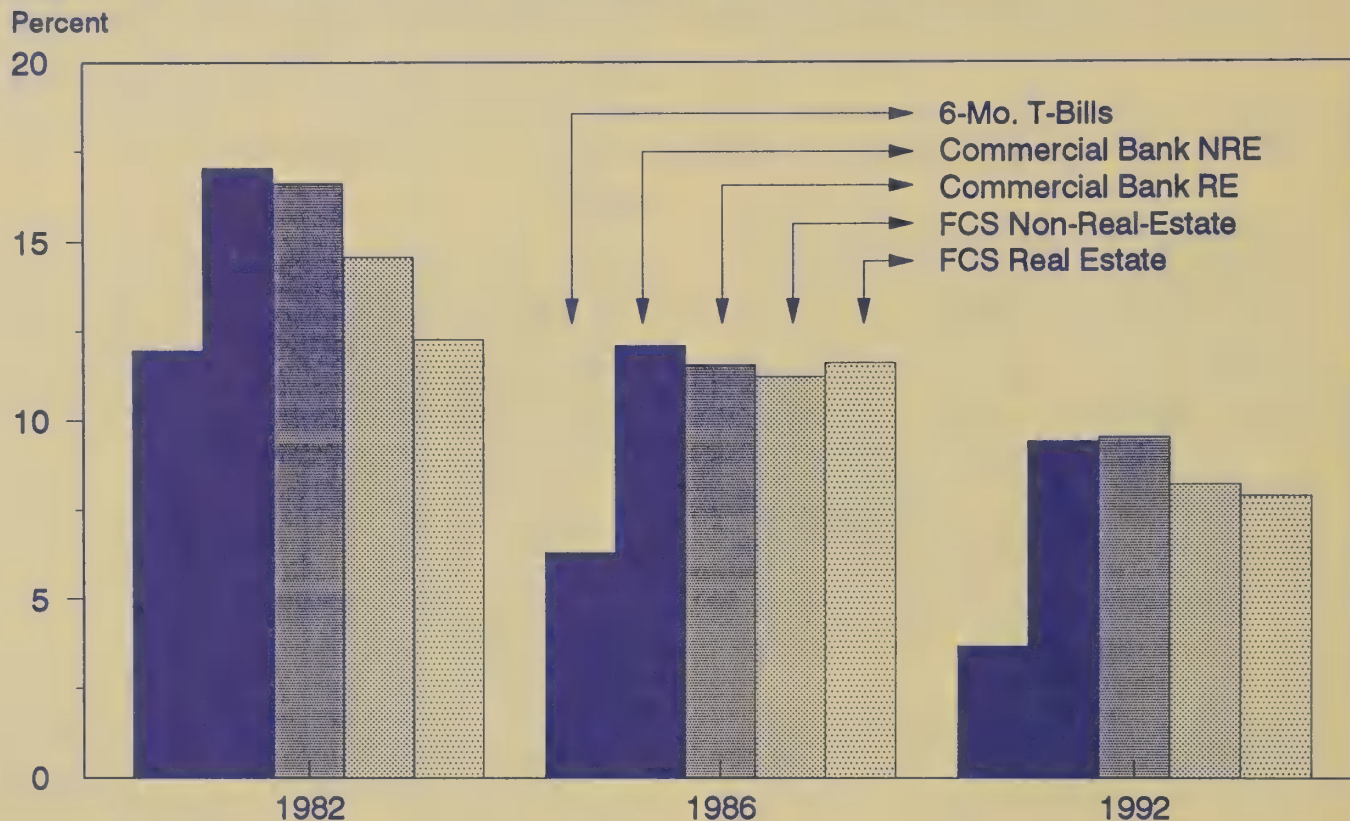
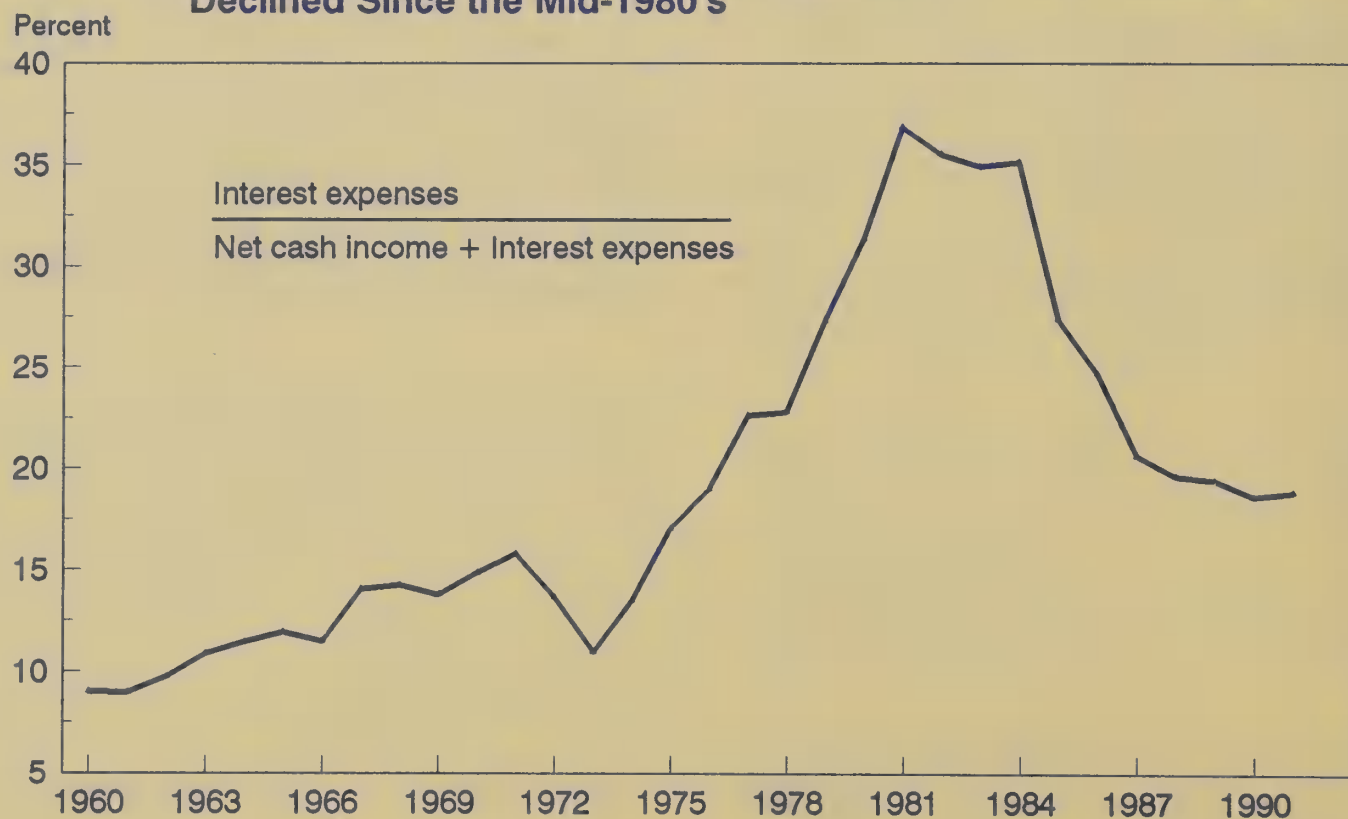


Figure 9--Interest Expenses as a Share of Net Cash Farm Income Have Declined Since the Mid-1980's



Recent Developments In Life Insurance Company Farm Mortgage Lending

by

Steven R. Koenig and Jerome M. Stam¹

Abstract: As with other lenders serving U.S. agriculture, life insurance company response to the 1980's farm financial crisis was varied. Some companies terminated farm mortgage lending altogether, while others consolidated their farm loan portfolios. Regardless of the response, the farm lending practices and policies of all life insurance companies have been shaped by the decade's events. Among the results are fewer players, larger average loan size, and shifts in the geographic distribution of loans.

Keywords: Life insurance, credit, debt, farm mortgages, financial stress

The Decade of Financial Stress

Casual comparison of statistics for the early 1980's and the 1990's suggests a rather uneventful decade for life insurance company lending to agriculture. Even measures of loan portfolio stress, such as loan delinquency rates, while somewhat higher at the end of the period, give no clue to changes the insurance industry experienced during the decade.

The industry ended 1980 with a 13.3-percent market share of farm real estate debt and ended 1991 with 12.7 percent--showing little change. Total outstanding loan volume did decline during the period--from \$12.9 to \$10 billion--but that decline is only slightly greater than the 18.8 percent drop in total outstanding farm real estate debt (including operator households) for the period. Loan defaults and foreclosures were up slightly in the late 1970's and early 1980's, but not far out of line with historical experience. Some insurance companies were very aggressive lenders in the 1970's farmland boom, and at least one company entered the farm mortgage market as a major player.

As the farm financial problems of the 1980's played out, life insurance companies farm loan portfolios were hit hard by foreclosures and principal writeoffs, with many highly leveraged operations unable to meet their financial obligations. Lending standards of insurance companies, like those of many other lenders during the farmland boom, had frequently failed to properly evaluate borrowers' debt servicing capacity. Instead, lending standards relied heavily on collateral value to ensure loan repayment. Even here, lax appraisal standards and liberal collateral valuation ultimately became costly for the industry when farmland prices plummeted as much as 50 percent in some Midwestern farm States.

By some measures, insurance company loan portfolios actually experienced greater financial stress than either Federal Land Banks (FLB's) or commercial banks (table A-1). Delinquency rates on outstanding dollar volume of life insurance farm mortgages rose from 1.5 percent at the beginning of 1980 to a peak of 19.9 percent at midyear 1986. During the same period, foreclosures rose from under 0.2 percent to 8.2 percent of outstanding volume. A year later, the market value of property acquired through foreclosure hit \$1.6 billion, an amount equivalent to over 15 percent of the industry's outstanding farm mortgage volume at the time. These measures of stress equal or exceed those of the Farm Credit System (FCS), whose financial turmoil received considerable publicity and resulted in \$1.26 billion of Federal assistance.

Statistics for individual companies were often more dismal than suggested by industry averages. One company's delinquency rate was 33 percent at the end of 1986. Several others reported rates exceeding 20 percent. The delinquency rates of all but one of the companies still actively lending today were below the industry average at yearend 1986.

Like other farm lenders, insurance companies restructured many nonperforming loans during the decade, either voluntarily or through bankruptcy court requirements. Companies generally tried to avoid foreclosure if a workable debt restructuring plan could be arranged. After peaking in 1986/87, financial stress did abate for insurance company loan portfolios but is still more elevated than pre-1980. The delinquency rate on life insurance company farm loans through most of 1992 hovered around 5.5 percent.

Companies Terminate Lending

The events of the 1980's led to concentration of farm mortgage assets within the industry. The number of companies making new loans in the conventional farm mortgage market dwindled from 12 in 1980 to 6 at the beginning of 1992, with most

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Insurance Company was the last to halt farm lending when it went into receivership in 1991.

Some companies that terminated lending do service existing farm mortgage customers or provide purchase money mortgages to finance the sale of land acquired through foreclosure. One insurance company still offers agribusiness credit but no longer serves the conventional farm mortgage market. Presumably some of the six companies who left could reenter the farm mortgage market with relative ease should they choose to do so in the future.

The six remaining companies specializing in farm lending (Metropolitan Life Insurance Company, The Travelers Realty Investment Company, Prudential Insurance Company of America, Equitable Agri-Business, John Hancock Financial Services, and Mutual of New York) represent a small subset of the total number of insurance companies. The insurance industry's retrenchment from farm lending occurred during a period when the total number of life insurance companies rose 8 percent and stood at 2,105 at the end of 1991.

Large Companies Dominate

Companies still active in farm lending are among the largest life insurance companies. Prudential and Metropolitan, for example, both command assets of over \$100 billion. This compares with the industrywide average of only \$737 million in assets at the end of 1991. Companies terminating farm lending during the decade were firms with small- to medium-sized farm loan portfolios. These companies had an average farm loan portfolio of \$400 million at the beginning of 1980.

The five largest companies active today dominated farm lending among insurance companies prior to 1980. These five companies now hold over 86 percent of the industry's farm mortgage assets, up from 74 percent in 1980. The farm loan portfolios for the individual companies range from \$1 to \$2 billion, or amounting to 15-21 percent of the portfolio for the industry. By comparison, the largest farmland-secured loan portfolio of a commercial bank at the start of 1992 was \$267 million (Bank of America) and the largest among district Farm Credit Banks was \$5.5 billion (AgriBank headquartered in St. Paul, Minnesota).

The share of industry farm mortgage assets held by the departing companies declined from 20.7 percent to 9.6 percent during 1980-92 and continues to shrink. One departing company, Phoenix Mutual Life, curtailed farm lending in 1986, having made its first farm mortgage in Hancock County, Illinois, in 1861. After a merger with Home Life Insurance, most of its remaining farm loan portfolio was sold to The Travelers in 1992. The new company, Phoenix Home Mutual Life Insurance, retained the small distressed portion of the farm loan portfolio.

Shift to Commercial Real Estate

The 30.9-percent real increase in all mortgage assets held by the life insurance industry during the decade was fueled by the growth in commercial real estate lending and not farm lending. Commercial real estate includes office, retail, indus-

trial, hotels and motels, and mixed-use classifications. Inflating commercial real estate values during the 1970's and 1980's made this category of lending appear to be a safe and profitable long-term investment.

As the industry focused on commercial real estate, farm mortgages as a percentage of total mortgages declined from 9.9 percent in 1980 to just 3.9 percent in 1991, while housing loans declined from 28.3 to 15.3 percent. In contrast, the commercial real estate share rose from 61.6 to 80.8 percent. This trend toward specialization in commercial real estate began before 1980, as commercial real estate mortgages accounted for only a third of the industry's mortgage assets in 1970. In 1920, farm mortgages made up half of all the industry's mortgage assets and 17.3 percent of its total assets. Farm mortgages now make up less than 1 percent of total industry assets.

Delinquent commercial real estate loans constitute a growing problem for some of the six remaining companies investing in farm mortgages. One major player, The Travelers, encountered financial problems resulting largely from losses in commercial real estate loans. In mid-1992, the delinquency rate for the industry's commercial real estate portfolio hit a record 7.5 percent.

Future increases in commercial real estate delinquencies and foreclosures are possible, which may encourage some companies to diversify their mortgage portfolios by adding farm mortgages. Conversely, other observers feel that commercial real estate problems have placed all mortgage investments, including farm mortgages, under closer scrutiny.

Farm Mortgage Portfolio Changes: Larger Loans Favored

The composition of insurance company farm mortgage portfolios changed as companies' lending policies modified during the past decade. While the six remaining companies have adapted somewhat different investment strategies, a policy common to most companies is to favor larger loans. In nominal terms, average outstanding loan size has increased 172.5 percent since 1980 and stood at \$380,874 at midyear 1992 (table A-3). As recently as 1988, average loan size was \$220,872, while the average outstanding FLB loan was only \$73,799. Since 1980, insurance company agricultural loan numbers have plummeted 63 percent, from 90,384 to 25,589 at yearend 1991.

For all practical purposes, life insurance companies are no longer players in the market for farm mortgages under \$150,000 and are relatively minor actors for mortgages under \$500,000. For Corn Belt farmers, this implies that most insurance companies are not in the market for mortgages on less than 200 acres (this assumes a 35-percent downpayment requirement, a \$150,000 loan minimum, and the 1992 Corn Belt average farmland value of \$1,158 per acre.)

Among the six remaining companies, at least three have stated minimum new farm loan sizes of \$500,000. One company recently reported an average of just under \$1 million for new

farm loans. Even companies making smaller loans prefer to make larger loans.

Insurance companies prefer larger loans because they provide a greater return over fixed originating costs. Many insurance companies also do not have the originating network necessary to compete effectively in the market for smaller loans, especially in certain geographic regions. Even the largest companies have only a handful of regional offices. And life insurance companies face less competition for large loans from small local banks, since regulations limit their ability to accommodate larger loan requests.

Insurance companies still issuing loans under \$500,000 often do so to accommodate existing customers or operate through correspondent relationships with other originators. American Council of Life Insurance (ACLI) gross mortgage flow survey data indicate that mortgage purchases by the industry are rising. The survey shows that from 1988 to 1991, annual loan volume purchased from other farm mortgage originators increased from zero to \$196 million. Prudential Life Insurance, which has established correspondent originating relationships with small banks may account for much of this growth. These correspondent relationships have been used by insurance companies in the past.

Agribusiness and Timber Assets Grow

Another common lending policy development in the last few years has been more emphasis on agribusiness and commercial timber lending (classified by the insurance industry as agricultural loans) and less on conventional farm lending. This too has contributed to the higher average size of agricultural mortgage loans because these firms generally have greater capital needs. The ACLI's Investment Bulletin provides survey data on the farm enterprises served by insurance mortgages. The data suggest that as much as 29 percent of outstanding farm mortgages at the end of 1991 went to agribusiness and timber enterprises as opposed to conventional farms.

These loans have since surpassed 29 percent, suggesting that companies continue to invest heavily in timber and agribusiness assets. At least two companies allocate as much as 40 percent of their farm lending to agribusiness and/or timber operations. The net result of the greater emphasis on agribusiness and timber loans is that life insurance company lending to family-sized farm producers is shrinking.

Lending Policies More Conservative

Insurance companies, like other farm lenders, now have more stringent lending standards than before the mid-1980's. Maximum loan-to-value ratios are now between 60 and 70 percent, and debt service requirements are higher than in the past. Shorter term interest-rate and loan-maturity commitments are now common, but some companies still offer fixed interest rate contracts for up to 15 years.

Competition for high-quality farm borrowers is keen. Most of the six companies indicate they would like more business but that it is difficult to find borrowers who meet their lending standards. In general, loan demand was flat to down in 1992.

However, some expect that today's low interest rates will spur lending as farmers refinance high-cost debt and step up capital purchases.

Geographic Concentration of Loan Portfolios Continues

Farm mortgage holdings by insurance companies continued to shift away from the Corn Belt to the Pacific Coast and the Southeast during the 1980's. The Corn Belt's share of outstanding industry mortgage volume declined from 23.5 percent to 16.4 percent, and the share captured by the Pacific region increased to 33.7 percent from 19.3 percent (table A-4). In 1960, the Corn Belt accounted for 31.1 percent of industry farm loans, while Pacific States accounted for only 9.3 percent. California has the largest concentration of life insurance farm mortgage loans. Insurance companies have invested very little in farm mortgages in the Northeast, Lake, and Appalachian regions.

In the Northeast, Lake States, Corn Belt, Northern Plains, and Appalachia, insurance companies are becoming an inconsequential factor in farm mortgage lending. The industry's market share of total farm real estate debt is below 10 percent in these regions and fell in all but three USDA regions during the 1980's, a trend pre-dating 1960. Buffeting this trend is the Pacific region, where insurance companies held 30 percent of the total farm real estate debt at 1990 yearend, up from 22 percent at 1980 yearend. In a few States, insurance companies' outstanding volume still equals that of the FCS, the Nation's largest farm mortgage holder, with a 33.7 percent market share at the beginning of 1992.

Policies emphasizing larger specialty, agribusiness, and timber enterprises might help explain the rapid departure of life insurance companies from financing Midwest agriculture and the rise in Pacific and Southeast lending. If the industry continues to concentrate its lending geographically, default risks associated with a spatially less diverse loan portfolio will likely rise. Geographic concentration also is a factor in Farmer Mac participation because underwriting standards require that pools be geographically diverse.

Conclusions

The farm financial problems of the 1980's had a strong impact on life insurance company lending to agriculture. Defaults among life insurance company mortgages were among the highest of any farm lender. As a result of high loan losses, six companies with small- to medium-sized farm loan portfolios terminated their farm lending operations. Departing companies had some of the most distressed loan portfolios in the industry. Farm lending dropped sharply during the decade, with outstanding farm mortgage volume held by the industry falling more than 20 percent from its peak. Farm mortgages now represent an inconspicuous share of the life insurance industry's total asset base.

The six remaining companies account for 86 percent of the industry's farm mortgages and generally have both high total assets and large farm mortgage portfolios. They have virtually pulled out of the small- and medium-sized farm mortgage market, and now have a greater preference for financing

agribusiness, timber, and specialty enterprises. Insurance companies' policies also favor larger loans, and several companies will not make new agricultural loans below \$500,000. These new policies have shifted more life insurance lending out of the Midwest to the Southeast and the West Coast. In large areas of the Midwest, insurance companies are virtually absent from the conventional farm mortgage market.

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Table A-1--Life insurance company farm lending statistics, 1976-92 1/

Year	Outstanding volume	Origination volume	Delinquency rate 2/	Foreclosure rate 3/	Acquired property
	---Million dollars---			---Percent---	Mil. dol.
1976	7,400	1,510	2.07	.37	NA
1977	8,819	2,373	1.16	.08	NA
1978	10,478	2,748	2.59	.20	NA
1979	12,165	2,806	1.45	.19	NA
1980	12,928	1,654	2.00	.15	NA
1981	13,074	1,108	3.69	.44	NA
1982	12,805	695	6.40	1.33	NA
1983	12,717	1,109	8.27	2.79	NA
1984	12,443	1,003	9.58	2.33	NA
1985	11,836	1,070	15.06	4.35	692
1986	10,940	1,219	17.01	7.26	1,442
1987	9,896	1,097	14.31	6.60	1,619
1988	9,582	1,424	8.87	3.92	1,226
1989	9,598	1,399	4.74	2.24	1,110
1990	10,186	1,833	4.22	.95	569
1991	10,029	1,526	3.84	.99	413
1992 4/	NA	NA	5.48	.61	346

NA=Not available. 1/ Yearend data. 2/ Delinquent loans including loans in the process of foreclosure, as a percent of outstanding dollar loan volume. 3/ farm loan is delinquent when interest payments are 90 days in arrears. 4/ Rates calculated as the percent of dollar value of loans outstanding at the beginning of the year.

Source: Steven R. Koenig, *Agricultural Mortgage Activity of Major Lenders*. Staff Report No. AGES 9223. U.S. Dept. Agr., Econ. Res. Serv., Aug. 1992.

Table A-2--Distribution of the outstanding dollar volume of farm real estate loans held by life insurance companies, 1980 and 1992

Company	Share of total loans		Current farm loan market status 3/
	January 1, 1980 1/	January 1, 1992 2/	
	Percent	Percent	Status
1. Metropolitan Life	12.148	18.684	Active
2. Travelers	13.649	13.972	Active
3. Prudential	17.941	16.338	Active
4. Equitable (U.S.)	15.777	19.114	Active
5. John Hancock	15.026	18.089	Active
6. FICMT	3.090	3.872	Active
7. Aetna	3.251	0.869	Inactive
8. Mutual Benefit	2.682	4.155	Inactive 4/
9. CIGNA	5.874	2.285	Inactive
10. Northwestern	3.495	.906	Inactive
11. Phoenix Mutual 5/	1.272	.074	Inactive
12. Connecticut Mutual	4.093	1.313	Inactive
13. Kansas City	0.997	.140	Inactive
14. Equitable (Iowa)	.140	.002	Inactive
15. American Amicable	.069	.011	Inactive
16. Business Men's	.065	.002	Inactive
17. Southwestern	.027	.007	Inactive
18. Principal Mutual 6/	.015	0	Inactive
19. Midland National	.004	0	Inactive
20. Great Southern	--- 7/	0	Inactive
21. Northwestern National	.384	.113	Inactive
Total	100.0	100.0	NA

NA= Not applicable. 1/ Data from companies' annual statements. Total was \$11,895,118,000, which is 97.781 percent of the \$12,165,000,000 held on December 31, 1979 as reported by the American Council of Life Insurance in its annual Life Insurance Fact Book. 2/ Based on data reported by individual companies. Total was \$10,735,567,000 or 107.045 percent of the \$10,029,000,000 for December 31, 1991 as reported by the American Council of Life Insurance in its Life Insurance Fact Book. 3/ "Active" = Participates as an active farm mortgage lender. "Inactive" = Permanently out of the market. 4/ Mutual Benefit went into receivership on July 15, 1991 and its future as an active farm mortgage lender is uncertain. 5/ Merged with Home Life Insurance in 1992. 6/ Formerly Bankers Life Insurance Company. 7/ Negligible.

Table A-3--Life insurance company nonagricultural and agricultural average mortgage loan sizes, selected years, 1960-91 1/

	Nonagricultural loans		Agricultural loans	
	Current dollars	Constant dollars (1987=100)	Current dollars	Constant dollars (1987=100)
	Dollars			
1960	13,163	50,627	14,121	54,312
1970	27,695	78,903	32,905	93,746
1980	102,720	143,264	139,761	194,925
1990	699,853	619,888	285,234	252,643
1991	833,940	712,769	330,880	282,803
	Percentage change			
1960-70	110.4	55.9	133.0	72.6
1970-80	270.9	81.6	324.7	107.9
1980-90	581.3	332.7	104.1	29.6

1/ December 31.

Sources: American Council of Life Insurance, Investment Bulletin, various releases, and Council of Economic Advisers, Economic Report of the President, 1992.

Table A-4--Life insurance company farm real estate loans outstanding (including operator households), by farm production region, selected years, 1960-90

Farm production region	Year 1/			
	1960	1970	1980	1990
Thousand dollars				
Northeast	49,589	38,500	108,700	56,900
Lake States	201,605	287,500	684,900	327,700
Corn Belt	923,801	1,281,300	3,031,500	1,667,500
Northern Plains	304,718	586,900	1,340,200	658,900
Appalachian	140,949	196,700	440,700	442,100
Southeast	137,096	332,100	873,800	1,091,400
Delta States	215,899	597,700	1,123,400	775,200
Southern Plains	387,241	755,600	1,211,200	744,900
Mountain	335,932	702,000	1,619,100	989,300
Pacific	277,779	832,000	2,494,300	3,432,400
United States	2,974,609	5,610,300	12,927,800	10,186,300
Percentage distribution				
Northeast	1.7	0.7	0.8	0.6
Lake States	6.8	5.1	5.3	3.2
Corn Belt	31.1	22.8	23.5	16.4
Northern Plains	10.2	10.5	10.4	6.5
Appalachian	4.7	3.5	3.4	4.3
Southeast	4.6	5.9	6.8	10.7
Delta States	7.3	10.7	8.7	7.6
Southern Plains	13.0	13.5	9.4	7.3
Mountain	11.3	12.5	12.5	9.7
Pacific	9.3	14.8	19.3	33.7
United States	100.0	100.0	100.0	100.0

1/ December 31.

Note: Northeast = CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT. Lake States = MI, MN, WI. Corn Belt = IL, IN, IA, MO, OH. Northern Plains = KS, ND, NE, SD. Appalachian = KY, NC, TN, VA, WV. Southeast = AL, FL, GA, SC. Delta States = AR, LA, MS. Southern Plains = OK, TX. Mountain = AZ, CO, ID, MT, NV, NM, UT, WY. Pacific = AK, CA, HI, OR, WA.

Sources: George Amols and Wilson Kaiser, Agricultural Finance Statistics, 1960-83, Stat. Bul. 706. USDA, Economic Research Service, April 1984, and Economic Indicators of the Farm Sector: State Financial Summary, various years USDA, Economic Research Service.

Has Consolidation Improved the Operating Efficiency of the Banks for Cooperatives?

by

Laura M. Geis and Robert N. Collender¹

Abstract: The Agricultural Credit Act of 1987 encouraged a merger of the Banks for Cooperatives (BC's), part of the Farm Credit System. Ten of the 12 district BC's merged operations with the Central BC in January 1989, to form CoBank, the National Bank for Cooperatives. In contrast to the mandated mergers of district Federal Land Banks and Federal Intermediate Credit Banks, the merger to form CoBank was voluntary and was motivated primarily to enhance efficiency rather than safety and soundness. Changes in the financial performance of the BC's before and after the consolidation are documented using standard financial analysis techniques. While cost savings were achieved in some areas, per-unit operating costs increased overall for the merged institution. Some risk reduction may have resulted from the merger as the variance of the return on assets has fallen. However, insufficient time has passed for statistical tests of risk reduction to be significant.

Keywords: Banks for Cooperatives, mergers, economies of scope and scale

Introduction

The farm debt crisis precipitated many changes in the structure of financial institutions serving agriculture and related businesses. Among these was the restructuring of the Farm Credit System, mandated in the Agricultural Credit Act of 1987 (P.L. 100-233). The act included provisions encouraging a voluntary merger of the Banks for Cooperatives (BC's).

In January 1989, 10 of the 12 district BC's merged operations with the Central BC to form CoBank, the National Bank for Cooperatives. In consolidating, the BC's sought to take advantage of economies of scale, reducing their costs per unit of output. Using annual accounting data provided by the FCS, this article examines particular aspects of the financial performance of the BC's before and after their merger.

Until the FCS was reorganized, it was divided into three categories of institutions that concentrated their lending activities in three broad areas. The BC's comprised the first category, with 13 Banks for Cooperatives, one for each of the 12 districts plus a Central Bank for Cooperatives. These institutions provided loans and financial services to agricultural cooperatives, as well as rural electric, water, and telecommunications systems. The BC's also make loans to foreign buyers of U.S. cooperative-sourced agricultural commodities. The Central BC participated in loans originated by the district BC's, allowing the latter to make and service loans exceeding their lending limits. Combined, the BC's

currently serve about 2,700 borrowers and hold over \$12 billion in outstanding loans.

The other two categories of FCS institutions serve agricultural producers, farm-related businesses, and residents of rural areas with populations below 2,500. Federal Land Banks (FLB's), through their related Federal Land Bank Associations (FLBA's), made real estate loans secured by first mortgages to finance land purchases, land improvements, rural housing, and farm-related businesses. Federal Intermediate Credit Banks (FICB's) and Production Credit Associations (PCA's) made production and intermediate-term loans for qualified agricultural purposes.

The 1987 act mandated that the existing FICB's and FLB's merge into consolidated Farm Credit Banks (FCB's) in each district. In addition, the associations (FLBA's and PCA's) were encouraged to merge voluntarily. The motivation for these mergers was to increase mobility of capital within the FCS as well as to increase operating efficiency and reduce risk. The effects of these mergers on financial performance were analyzed by Robert Collender (2).

Unlike the FLB's, FICB's, and related associations, the BC's remained profitable and maintained good credit quality throughout the farm debt crisis. In contrast to the legislated mergers of the district FLB's and FICB's into FCB's, the 1987 act did not mandate a merger of the Banks for Cooperatives. However, it did require the formation of a Special Committee on BC Structure, charged with developing a proposal for the voluntary merger of the BC's.

The issue of consolidating some or all of the BC's had been explored within the FCS for a number of years. Structural

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changes in the farm sector had increased consolidation within the cooperative sector. These changes included a reduction in the number of farmers, increased competition for farmers' business from investor-owned firms, and stiffer international competition. Because cooperatives were forced to become increasingly efficient in order to survive, they began to demand of their lenders, including the BC's, a wider array of financial products at a lower cost. In particular, larger cooperatives, whose business was actively sought by many lenders, exerted pressure on the BC's to lower credit costs.

In addition to increased competitive pressures, the BC's faced declining loan demand because of government programs, such as the payment-in-kind and conservation-reserve programs, reduced production of certain commodities. The BC system as a whole was suffering from declining loan volume, and some districts were losing market share.

These pressures led some of the BC's to examine voluntarily the potential gains from consolidation. The continuation of this process, mandated in the 1987 act, resulted in the merger of 10 of the district BC's and the Central Bank to form CoBank. The BC's in the St. Paul, Minnesota and Springfield, Massachusetts districts chose not to merge.

The merger changed the lending areas of the remaining banks. Prior to the merger, each BC had an exclusive territorial charter that allowed it to solicit business among the cooperatives located in its district without competition from other BC's. After the merger, territorial restrictions were removed, allowing the three remaining BC's to solicit business nationwide and ostensibly creating competition among the BC's. However, to a large degree the remaining BC's have maintained cooperative relationships with each other. The St. Paul and Springfield BC's still maintain participation relationships with CoBank on loans that exceed their lending limits.²

For the most part, authority to compete with each other has not changed the customer base of the remaining BC's, although it may have improved the efficiency of their operations. With the exception of the Columbia, South Carolina office, which moved to Atlanta, CoBank has maintained branch loan offices, called banking centers, in the cities where the former district BC's were located. Most customers continue to deal with the same loan officers as before the merger. The St. Paul BC has picked up a few customers in South Dakota, Washington, and Oregon, outside its former lending area of the upper Midwest, but most of these were not formerly customers of other district BC's. St. Paul lost a few customers to CoBank, and Springfield neither gained nor lost customers after the merger.

Potential Impact of the Merger

The economic justification for mergers is twofold: to capture cost savings and to reduce risk. Cost savings arise from

² The St. Paul and Springfield BC's were not permitted to lend more than 25 percent of total equity capital to a single borrower on term loans nor more than 35 percent of seasonal borrowings.

economies of scale and/or scope. Economies of scale refer to unit cost savings from more productive use of specialized labor or capital, or from the spread of fixed costs over increased levels of output. Economies of scope suggest joint usage of fixed resources. In the financial services industry, inputs that might foster economies of scale or scope include specialized labor, computer and telecommunications technology, and information gathering (1).

If economies of scale exist, larger institutions can more fully and productively employ specialized labor than can smaller institutions. Computer and telecommunications technologies, for example, carry large initial costs, but involve low costs per transaction once in place; increasing the number of transactions leads to further reductions in per-unit costs. Similarly, gathering documentation for lending decisions is a costly activity for financial institutions. The broader the scope of financial services the institution can provide once the information has been collected, the lower the information costs will be per transaction.

One of the primary goals of the BC consolidation was to achieve operational cost savings by eliminating replication of many functions which were being performed by each district BC. The Special Committee on BC Structure anticipated that economies of scale would be attained primarily through the centralization of administrative, financial, accounting, and automation systems and the reduction of duplicative effort (5). For example, the committee predicted that fewer employees would be needed to carry out certain tasks that were previously performed many times throughout the BC system. Among these tasks were coordination with the FCS Funding Corporation, preparation of quarterly reports to the Farm Credit Administration, and preparation of audited financial statements.

The Special Committee examined potential operational cost savings associated with two possible merger scenarios: a merger of all 13 BC's into a National Bank, and a merger of six district BC's and the Central BC to form a United Bank. Under the National Bank scenario, it was anticipated that total operating costs would decline 20 percent from 1987 levels for the BC system as a whole, once a "steady state" had been achieved after the merger.³ Under the United Bank scenario, total operating costs were forecast to decline by 13 percent from the 1987 level (5).

The consolidation that subsequently took place involved 11 banks--fewer than the National Bank scenario but more than the United Bank scenario--so costs were expected to fall between 13 and 20 percent from 1987 levels despite inflation.

³ The "steady state" period was defined in the proxy statement [(5), p. 33] to be "the first annual operating period after which all start-up costs directly associated with the merger have been incurred and all expected operational cost efficiencies resulting from the merger have been attained." The Special Committee expected the steady state to be achieved 2 to 3 years after the merger was legally consummated. Given the cost increases experienced by CoBank, it could be argued that the relevant comparison of pre-merger performance is not with the average performance during the 3 years following the merger, but with CoBank's 1991 performance. Similar conclusions can be drawn from both the 3 year average and the yearend 1991 ratios, with total costs per unit of assets increasing each year since the merger.

However, instead of declining in absolute terms, total operating costs increased in the first 3 years after the merger, both in absolute terms and per dollar of assets.

The other economic justification for mergers--risk reduction--arises from diversification if returns to the individual merging entities are less than perfectly correlated. Imperfect correlation of returns means that low profits from one entity would be offset by higher profits from another. When returns are not well correlated, a merged entity will experience lower fluctuations in returns than either entity does separately. On the other hand, risk reduction benefits will not be significant if returns to the merging institutions are highly correlated.

Measuring Merger Effects

This research effort uses standard financial analysis techniques to assess the impact of the BC consolidation on the financial performance of the three remaining banks. To achieve this goal, measures are developed to evaluate the potential impact of the merger on operating performance. Ratios reflecting the increased efficiency expected from consolidation can be divided into three categories. Increases in efficiency should lead to:

- o a decline in the share of total assets devoted to overhead assets (primarily premises and equipment and deferred expenses),
- o a decline in the ratio of noninterest expenses to output as measured by total assets, and/or
- o a decline in the ratio of noninterest expenses to gross operating income.

Statistical tests determine the importance of any differences in these ratios among pre- and post-merger institutions. A standard test for the difference in means between pre- and post-merger ratios is used to determine the impact of the consolidation.

Table B-1--Efficiency ratios and risk measures
<u>Ratios of expenses to assets</u>
Noninterest expense to total assets
Salaries and benefits to total assets
Occupancy and equipment expense to total assets
<u>Ratios measuring asset composition</u>
Overhead assets to total assets
<u>Ratios measuring effective use of assets in generating revenue</u>
Noninterest expense to total operating revenue
Salaries and benefits to total operating revenue
Occupancy and equipment expense to total operating revenue
<u>Risk measure</u>
Variance of return on assets

Evidence of the risk-reducing effects from merger activity is measured through the variance of the realized rate of return on assets. One possible effect of mergers is to reduce the variability of returns by diversifying the banks' portfolios. A statistical test is performed to determine if the variance of the rate of return on assets (ROA) decreased after the merger compared with the variance of ROA of the combined pre-merger institutions. If post-merger institutions achieve the risk level of the combined pre-merger institutions, then risk reduction from internalization of diversification has been achieved. If post-merger institutions reduce risk beyond this level, then some synergy in risk management has been achieved.

Table B-1 presents specific efficiency ratios and risk measures used in this study.

The Data

The data used in this article are from yearend financial statements of the Banks for Cooperatives existing before and after the consolidation, which took place on January 1, 1989. Through 1988, the data were published by the Farm Credit Corporation of America (FCCA), and since then by the Federal Farm Credit Banks Funding Corporation (FFCBFC) in its quarterly "Summary Report of Condition and Performance of the FCS."

For purposes of comparison, we created pro forma financial statements for the consolidating BC's for the years preceding the creation of CoBank (1986-88). This is a simple matter of addition except for interbank transactions. These transactions involve more than one BC and, therefore, present the possibility of double counting activity when financial statements are combined. Thus, an assumption needed to be made about interbank transactions in the pre-consolidation period. Available data supported two possible assumptions: Either (a) all interbank transactions were among the consolidating banks and had to be subtracted from the pro forma statements, or (b) all interbank transactions were external to the consolidating banks and did not have to be subtracted from the pro forma statements. Two sets of ratios were computed for the pre-merger period; one for each assumption. Little quantitative and no qualitative differences exist between the ratios and tests computed under these alternatives. Therefore, we report only the set of ratios computed from assumption (a).

As in any such study, the available data dictate the depth and reliability of the analysis. The aggregated categories in which the data are published, such as "salary and benefits," "miscellaneous expenses," "miscellaneous income," and "other operating expenses," limit detailed analysis of operating efficiency or asset management. Further, accounting data are, at best, simply a reflection of actual performance and inherently backward looking (as opposed to forward-looking market value data that are generally not available since FCS stock is essentially not tradable). Finally, the period of analysis is short, and front-end costs associated with the consolidation may still be reflected in the data, masking some actual cost savings.

Accounting conventions and practices have the potential to distort as well as illuminate actual financial performance. The intent here is to concentrate on operating results and thus diminish distortions from extraordinary transactions and from transactions that rely heavily on management judgment. Extraordinary transactions include such items as interbank transfers, sales of buildings, and repurchase of high-cost debt. Only operating results are considered.

Results: Cost Savings

The goal of cutting costs through merger has been only partially achieved by the BC's. The results indicate that consolidation did not lead to immediate per-unit cost savings for CoBank. The bank did manage to reduce personnel and occupancy costs after the consolidation, but not as much as non-merging banks. Although the introduction of competition between the remaining BC's did not result in many customers changing banks, it may have encouraged the non-merging banks to operate more efficiently.

After the merger, noninterest expenses as a percent of total assets decreased for the St. Paul and Springfield BC's, while the ratio increased for CoBank. However, the change in the ratio from pre-merger levels was not statistically significant for any of the banks. This indicates that, at least in the 3 years following the merger, the predicted reduction in per unit operating costs--the original intent of the consolidation--was not achieved (6).

Disaggregating noninterest expenses into subcategories reveals that CoBank did reduce salary and benefits and occupancy expenses per dollar of assets after the merger, as did St. Paul and Springfield. However, for CoBank, the reduction in per-unit salary and occupancy expenses was more than offset by an increase in other operating expenses, which includes director compensation, purchased services, data processing, other compensation, and a category labeled "other." The largest component of other operating expenses, the category "other" includes travel expenses for directors and bank employees, communications and postage, member relations, training, and examination fees. Many of these expense categories may have shown temporary increases associated with merging the operations of the 11 constituent banks, and may decline when operational changes, such as merging management information systems, have been fully implemented. Alternatively, they may represent permanent increases in operating costs associated with managing a nationwide institution.

All of the BC's experienced a change in asset composition in the last few years. Overhead assets as a percent of total assets decreased for all three banks after the merger. The differences between pre- and post-merger levels were statistically significant for all of the banks. Because all three banks reduced the share of total assets dedicated to overhead, it is difficult to infer that CoBank's reduction was the direct result of the merger. For all three banks, the reduction in overhead might be a byproduct of the new ability to compete with one another as provided in the Agricultural Credit Act of 1987.

After the merger, all three BC's showed evidence of increased efficiency in the use of assets and personnel to generate revenue. Ratios of salary and benefits to operating revenue, and occupancy and equipment expenses to operating revenue, fell for all three banks. The declines in these ratios from pre-merger levels were statistically significant for the Springfield and St. Paul BC's. The ratio of noninterest expense to total operating revenue declined for the Springfield and St. Paul BC's after the merger, with the decline statistically significant only for St. Paul.

CoBank, however, showed an increase in noninterest expense as a percent of operating revenue. The expense-to-revenue ratios revealed that CoBank has become more efficient in its use of personnel and facilities and equipment to generate revenue, but these efficiency increases were counterbalanced by the increases in other operating expenses, explained above.

Table B-2 presents averages of the annual efficiency ratios for pre- and post-merger institutions. Test results for differences in the averages for pre- and post-merger periods appear in the footnotes to the tables.

Results: Risk Reduction

One goal of the BC merger was to reduce the variability of bank earnings due to geographically based influences such as weather and concentration of loans in a particular commodity. To determine whether the merger achieved this potential risk reduction, a test was performed for the difference in variance of the rate of return on assets (ROA) between combined pre-merger and post-merger institutions.

The variance of ROA decreased for all three banks after the merger. However, none of these decreases was statistically significant. A drawback of this analysis of risk reduction is that insufficient time has passed to evaluate the risk-reducing effects of the merger with a high degree of confidence. Table B-3 presents variances of ROA's before and after the merger.

Summary and Conclusions

The results of this study indicate that the BC's have had some success in reducing costs after their merger in 1989. They were able to reduce certain categories of expenses, such as salaries and occupancy costs; however, for CoBank, these gains were outweighed by increases in other operating expenses. All the BC's reduced the percentage of total assets devoted to overhead, and improved the efficiency of their use of personnel and assets to generate revenue. CoBank does not appear to have achieved a substantial reduction in the variability of its returns after the merger, although it is too early to evaluate conclusively the risk-reducing consequences of the merger. Apparently, the Springfield and St. Paul BC's were able to improve efficiency without incurring the expenses associated with the merger.

Changes in structure, regulation, and the economic environment that affect bank performance may not be fully reflected in the shortrun data used here. Economies of scale and scope may fail to be realized after a merger, especially in the short run. For example, some economies may have already been realized through cooperation and shared management (par-

ticularly credit management) among the BC's prior to their consolidation. There may also be shortrun obstacles to the realization of cost savings, including incompatibility of management philosophy and operating principles, existing investment in incompatible management information system technologies, and expenses for severance benefits related to reductions in work force. Any of these factors may help explain the results of this study.

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Table B-2--Annual average efficiency ratios for combined pre-merger institutions and post-merger institutions 1/

Item	Springfield	St. Paul	CoBank
Percent			
<u>Noninterest expense to total assets</u>			
Pre-merger institutions	.78	.43	.36
Post-merger institutions	.69	.38	.41
<u>Salaries and benefits expense to total assets</u>			
Pre-merger institutions	.60	.30	.24
Post-merger institutions	.41 2/	.20 3/	.21
<u>Occupancy and equipment expense to total assets</u>			
Pre-merger institutions	.11	.10	.06
Post-merger institutions	.05 2/	.04 4/	.05
<u>Overhead assets to total assets</u>			
Pre-merger institutions	1.98	.39	.37
Post-merger institutions	1.22 2/	.24 3/	.29 3/
<u>Noninterest expense to gross operating income</u>			
Pre-merger institutions	8.97	4.59	4.57
Post-merger institutions	7.93	4.29 2/	4.93
<u>Occupancy and equipment expense to gross operating income</u>			
Pre-merger institutions	1.28	1.03	.76
Post-merger institutions	.56 2/	.39 3/	.60
<u>Salaries and benefits expense to gross operating income</u>			
Pre-merger institutions	6.57	3.09	3.04
Post-merger institutions	4.73	2.29 2/	2.57

1/ Data for pre-merger institutions is from 1986 through 1988. Data for post-merger institutions is from 1989 through 1991. Two-tailed t-tests with 4 degrees of freedom were used to test the difference between reported average annual statistics. An increase (decrease) in these ratios indicates performance worsened (improved). All significant differences in mean ratios are associated with improved performance. 2/ Difference in means significant at the 1-percent level. 3/ Difference in means significant at the 5-percent level. 4/ Difference in means significant at the 10-percent level.

Sources: Calculated from Summary Reports of Condition and Performance of the FCS, Farm Credit Council of America, and Federal Farm Credit Banks Funding Corporation.

Table B-3--Differences in variances of return on assets between combined pre-merger and post-merger institutions 1/

	Springfield	St. Paul	CoBank
Percent			
Pre-merger institutions	0.40	0.20	0.44
Post-merger institutions	0.08	0.01	0.03

1/ F-test for decrease in variance not significant for any bank at the 10-percent.

Sources: Calculated from summary reports of Condition and Performance of the FCS, Farm Credit Council of America, and Federal Farm Credit Banks Funding Corporation.

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Appendix table 1--Total farm debt, excluding households, December 31, 1976-92

Debt owed to reporting institutions							
	Farm Credit System	Commercial banks	Farmers Home Adm.	Life insurance companies	Total	Individuals and others 1/	Total debt
Million dollars							
1976	29,007	28,077	4,963	6,828	68,874	27,191	96,065
1977	32,992	31,289	6,378	8,150	78,808	32,047	110,855
1978	37,564	34,435	8,833	9,698	90,529	36,871	127,400
1979	45,376	37,125	14,442	11,278	108,222	43,329	151,551
1980	52,975	37,751	17,464	11,998	120,188	46,636	166,824
1981	61,566	38,799	20,802	12,150	133,317	49,064	182,381
1982	64,219	41,890	21,275	11,829	139,213	49,592	188,805
1983	63,708	45,422	21,427	11,666	142,223	48,840	191,064
1984	64,686	47,245	23,262	11,889	147,082	46,699	193,782
1985	56,168	44,470	24,534	11,270	136,442	41,150	177,592
1986	45,906	41,620	24,137	10,374	122,037	34,923	156,960
1987	40,026	41,130	23,552	9,352	114,060	30,338	144,399
1988	37,138	42,706	21,852	9,018	110,714	28,654	139,368
1989	36,164	44,794	18,973	9,051	108,982	28,202	137,185
1990	34,954	47,432	16,954	9,641	108,981	27,801	136,782
1991	35,356	50,169	15,212	9,495	110,232	28,522	138,754
1992P	35,234	52,132	13,594	9,467	110,427	29,236	139,663
Percent change in year							
1976	15.0	13.8	7.8	10.2	13.5	11.8	13.0
1977	13.7	11.4	28.5	19.4	14.4	17.9	15.4
1978	13.9	10.1	38.5	19.0	14.9	15.1	14.9
1979	20.8	7.8	63.5	16.3	19.5	17.5	19.0
1980	16.7	1.7	20.9	6.4	11.1	7.6	10.1
1981	16.2	2.8	19.1	1.3	10.9	5.2	9.3
1982	4.3	8.0	2.3	-2.6	4.4	1.1	3.5
1983	-0.8	8.4	0.7	-1.4	2.2	-1.5	1.2
1984	1.5	4.0	8.6	1.9	3.4	-4.4	1.4
1985	-13.2	-5.9	5.5	-5.2	-7.2	-11.9	-8.4
1986	-18.3	-6.4	-1.6	-8.0	-10.6	-15.1	-11.6
1987	-12.8	-1.2	-2.4	-9.9	-6.5	-13.1	-8.0
1988	-7.2	3.8	-7.2	-3.6	-2.9	-5.6	-3.5
1989	-2.6	4.9	-13.2	0.4	-1.6	-1.6	-1.6
1990	-3.3	5.9	-10.6	6.5	0.0	-1.4	-0.3
1991	-1.2	5.8	-10.3	-1.5	1.1	2.6	1.4
1992P	-0.3	3.9	-10.6	-0.3	0.2	2.5	0.7
Percentage distribution of total debt							
1976	30.2	39.2	5.2	7.1	71.7	28.2	100.0
1977	29.8	28.2	5.8	7.4	71.1	28.9	100.0
1978	29.5	27.0	6.9	7.6	71.1	28.9	100.0
1979	29.9	24.5	9.5	7.4	71.4	28.6	100.0
1980	31.8	22.6	10.5	7.2	72.0	28.0	100.0
1981	33.8	21.3	11.4	6.7	73.1	26.9	100.0
1982	34.0	22.2	11.3	6.3	73.7	26.3	100.0
1983	33.3	23.8	11.2	6.1	74.4	25.6	100.0
1984	33.4	24.4	12.0	6.1	75.9	24.1	100.0
1985	31.6	25.0	13.8	6.3	76.8	23.2	100.0
1986	29.2	26.5	15.4	6.6	77.8	22.2	100.0
1987	27.7	28.5	16.3	6.5	79.0	21.0	100.0
1988	26.6	30.6	15.7	6.5	79.4	20.6	100.0
1989	26.4	32.7	13.8	6.6	79.4	20.6	100.0
1990	25.6	34.7	12.4	7.0	79.7	20.3	100.0
1991	25.5	36.2	11.0	6.8	79.4	20.6	100.0
1992P	25.2	37.3	9.7	6.8	79.1	20.9	100.0

P = Preliminary. 1/ Includes individuals and others (land for contract, merchants and dealers credit, etc.) and CCC storage and drying facilities loans.

Appendix table 2--Real estate farm debt, excluding households, December 31, 1976-92

	Debt owed to reporting institutions					Individuals and others	CCC	Total real estate
	Farm Credit System	Farmers Home Adm.	Life insurance companies	Commercial banks	Total		storage and drying facilities	
Million dollars								
1976	16,881	3,311	6,828	6,075	33,094	17,258	144	50,496
1977	19,640	3,613	8,150	6,994	38,397	19,556	492	58,445
1978	22,686	3,746	9,698	7,717	43,847	21,712	1,148	66,707
1979	27,322	6,254	11,278	7,798	52,653	25,660	1,391	79,704
1980	33,225	7,435	11,998	7,765	60,423	27,813	1,456	89,692
1981	40,298	8,096	12,150	7,584	68,128	29,318	1,342	98,788
1982	43,661	8,298	11,829	7,568	71,356	29,326	1,127	101,809
1983	44,316	8,572	11,666	8,347	72,902	29,386	888	103,176
1984	46,594	9,522	11,889	9,626	77,632	28,436	623	106,691
1985	42,166	9,820	11,270	10,732	73,988	25,773	307	100,068
1986	35,589	9,712	10,374	11,942	67,617	22,657	123	90,397
1987	30,642	9,429	9,352	13,541	62,964	19,377	46	82,387
1988	28,372	8,953	9,018	14,397	60,740	16,873	21	77,634
1989	26,674	8,130	9,051	15,551	59,406	15,941	12	75,359
1990	25,255	7,580	9,641	16,165	58,641	15,054	7	73,702
1991	25,100	6,999	9,495	17,315	58,909	15,533	4	74,446
1992	24,770	6,378	9,467	18,407	59,022	16,004	2	75,028
Percent change in year								
1976	16.2	8.8	10.2	8.1	12.6	9.5	-15.3	11.4
1977	16.3	9.1	19.4	15.1	16.0	13.3	241.7	15.7
1978	15.5	3.7	19.0	10.3	14.2	11.0	133.3	14.1
1979	20.4	67.0	16.3	1.0	20.1	18.2	21.2	19.5
1980	21.6	18.9	6.4	-0.4	14.8	8.4	4.7	12.5
1981	21.3	8.9	1.3	-2.3	12.8	5.4	-7.8	10.1
1982	8.3	2.5	-2.6	-0.2	4.7	0.0	-16.0	3.1
1983	1.5	3.3	-1.4	10.3	2.2	0.2	-21.2	1.3
1984	5.1	11.1	1.9	15.3	6.5	-3.2	-29.8	3.4
1985	-9.5	3.1	-5.2	11.5	-4.7	-9.4	-50.7	-6.2
1986	-15.6	-1.1	-8.0	11.3	-8.6	-12.1	-59.9	-9.7
1987	-13.9	-2.9	-9.9	13.4	-6.9	-14.5	-62.6	-8.9
1988	-7.4	-5.0	-3.6	6.3	-3.5	-12.9	-54.3	-5.8
1989	-6.0	-9.2	0.4	8.0	-2.2	-5.5	-42.9	-2.9
1990	-5.3	-6.8	6.5	3.9	-1.3	-5.6	-41.7	-2.2
1991	-0.6	-7.7	-1.5	7.1	0.5	3.2	-42.9	1.0
1992P	-1.3	-8.9	-0.3	6.3	0.2	3.0	-50.0	0.8
Percentage distribution of debt								
1976	33.4	6.6	13.5	12.0	65.5	34.2	0.3	100.0
1977	33.6	6.2	13.9	12.0	65.7	33.5	0.8	100.0
1978	34.0	5.6	14.5	11.6	65.7	32.5	1.7	100.0
1979	34.3	7.8	14.2	9.8	66.1	32.2	1.7	100.0
1980	37.0	8.3	13.4	8.7	67.4	31.0	1.6	100.0
1981	40.8	8.2	12.3	7.7	69.0	29.7	1.4	100.0
1982	42.9	8.2	11.6	7.4	70.1	28.8	1.1	100.0
1983	43.0	8.3	11.3	8.1	70.7	28.5	0.9	100.0
1984	43.7	8.9	11.1	9.0	72.8	26.7	0.6	100.0
1985	42.1	9.8	11.3	10.7	73.9	25.8	0.3	100.0
1986	39.4	10.7	11.5	13.2	74.8	25.1	0.1	100.0
1987	37.2	11.4	11.4	16.4	76.4	23.5	0.1	100.0
1988	36.5	11.5	11.6	18.5	78.2	21.7	0.0	100.0
1989	35.4	10.8	12.0	20.6	78.8	21.2	0.0	100.0
1990	34.3	10.3	13.1	21.9	79.6	20.4	0.0	100.0
1991	33.7	9.4	12.8	23.3	79.1	20.9	0.0	100.0
1992P	33.0	8.5	12.6	24.5	78.7	21.3	0.0	100.0

P = Preliminary

Appendix table 3--Nonreal estate farm debt, excluding households, December 31, 1976-92

Debt owed to reporting institutions							CCC crop loans
Commercial banks	Farm Credit System	Farmers Home Adm.	Total	Individuals and others	Total nonreal estate		
Million dollars							
1976	22,002	12,127	1,652	35,781	9,789	45,570	936
1977	24,295	13,352	2,764	40,411	11,999	52,410	4,146
1978	26,718	14,878	5,086	46,682	14,011	60,693	4,646
1979	29,327	18,054	8,188	55,569	16,278	71,847	3,714
1980	29,986	19,750	10,029	59,765	17,367	77,132	3,836
1981	31,215	21,268	12,706	65,187	18,404	83,593	6,888
1982	34,322	20,558	12,977	67,857	19,139	86,996	15,204
1983	37,075	19,392	12,855	69,322	18,566	87,888	10,576
1984	37,619	18,092	13,740	69,451	17,640	87,091	8,428
1985	33,738	14,002	14,714	62,454	15,070	77,524	17,598
1986	29,678	10,317	14,425	54,420	12,143	66,563	19,190
1987	27,589	9,384	14,123	51,096	10,916	62,012	15,120
1988	28,309	8,766	12,899	49,974	11,760	61,734	8,902
1989	29,243	9,490	10,843	49,576	12,250	61,826	5,225
1990	31,267	9,699	9,374	50,340	12,740	63,080	4,377
1991	32,854	10,256	8,213	51,323	12,985	64,308	3,340
1992P	33,724	10,464	7,216	51,404	13,230	64,635	4,000
Percent change in year							
1976	15.5	13.5	5.9	14.3	16.8	14.8	303.4
1977	10.4	10.1	67.3	12.9	22.6	15.0	342.9
1978	10.0	11.4	84.0	15.5	16.8	15.8	12.1
1979	9.8	21.3	61.0	19.0	16.2	18.4	-20.1
1980	2.2	9.4	22.5	7.6	6.7	7.4	3.3
1981	4.1	7.7	26.7	9.1	6.0	8.4	79.6
1982	10.0	-3.3	2.1	4.1	4.0	4.1	120.7
1983	8.0	-5.7	-0.9	2.2	-3.0	1.0	-30.4
1984	1.5	-6.7	6.9	0.2	-5.0	-0.9	-20.3
1985	-10.3	-22.6	7.1	-10.1	-14.6	-11.0	108.8
1986	-12.0	-26.3	-2.0	-12.9	-19.4	-14.1	9.0
1987	-7.0	-9.0	-2.1	-6.1	-10.1	-6.8	-21.2
1988	2.6	-6.6	-8.7	-2.2	7.7	-0.5	-41.1
1989	3.3	8.3	-15.9	-0.8	4.2	0.1	-41.3
1990	6.9	2.2	-13.5	1.5	4.0	2.0	-16.2
1991	5.1	5.7	-12.4	2.0	1.9	1.9	-23.7
1992P	2.6	2.0	-12.1	0.2	1.9	0.5	19.8
Percentage distribution of debt							
1976	48.3	26.6	3.6	78.5	21.5	100.0	
1977	46.4	25.5	5.3	77.1	22.9	100.0	
1978	44.0	24.5	8.4	76.9	23.1	100.0	
1979	40.8	25.1	11.4	77.3	22.7	100.0	
1980	38.9	25.6	13.0	77.5	22.5	100.0	
1981	37.3	25.4	15.2	78.0	22.0	100.0	
1982	39.5	23.6	14.9	78.0	22.0	100.0	
1983	42.2	22.1	14.6	78.9	21.1	100.0	
1984	43.2	20.8	15.8	79.7	20.3	100.0	
1985	43.5	18.1	19.0	80.6	19.4	100.0	
1986	44.6	15.5	21.7	81.8	18.2	100.0	
1987	44.5	15.1	22.8	82.4	17.6	100.0	
1988	45.9	14.2	20.9	81.0	19.0	100.0	
1989	47.3	15.3	17.5	80.2	19.8	100.0	
1990	49.6	15.4	14.9	79.8	20.2	100.0	
1991	51.1	15.9	12.8	79.8	20.2	100.0	
1992P	52.2	16.2	11.2	79.5	20.5	100.0	

P = Preliminary

Appendix table 4--Interest rates on short-term loans, 1960-92

Agricultural nonreal estate								
Year	Bank Prime 1/	6-Month U.S. Treasury 2/	Commercial banks 3/		Farm Credit System 4/	FmHA 5/		Average on outstanding debt 6/
			Large banks	Other banks		Regular	Limited resource	
Percent								
1960	4.82	NA	NA	NA	NA	5.00	NA	6.12
1965	4.54	NA	NA	NA	NA	5.00	NA	5.97
1970	7.91	6.87	NA	NA	9.45	6.88	NA	7.45
1975	7.86	6.39	NA	NA	9.11	8.63	NA	7.83
1980	15.27	12.39	15.90	14.95	12.74	11.00	6.82	11.11
1981	18.87	15.06	19.78	18.20	14.46	14.04	8.13	12.66
1982	14.86	11.96	16.20	17.05	14.58	13.73	10.75	12.61
1983	10.79	9.27	12.13	14.13	11.95	10.31	7.31	11.51
1984	12.04	10.46	13.33	14.48	12.47	10.25	7.25	11.25
1985	9.93	8.09	11.10	13.35	12.40	10.25	7.25	10.13
I	10.54	8.93	11.70	13.80	12.91	10.25	7.25	NA
II	10.20	8.17	11.50	13.60	12.50	10.25	7.25	NA
III	9.50	7.64	10.60	12.90	12.16	10.25	7.25	NA
IV	9.50	7.60	10.60	13.10	12.03	10.25	7.25	NA
1986	8.33	6.30	9.55	12.10	11.23	8.66	5.66	10.18
I	9.37	7.29	10.30	12.80	11.40	10.25	7.25	NA
II	8.61	6.46	9.70	12.00	11.25	8.71	5.71	NA
III	7.85	5.83	9.30	12.10	11.25	8.00	5.00	NA
IV	7.50	5.63	8.90	11.50	11.00	7.67	4.67	NA
1987	8.21	6.35	9.18	11.28	10.10	8.12	5.27	10.67
I	7.50	5.78	8.40	11.20	10.10	7.50	4.50	NA
II	8.05	6.30	9.40	11.20	10.00	7.50	4.50	NA
III	8.40	6.49	9.30	11.10	10.00	8.75	5.57	NA
IV	8.87	6.82	9.60	11.60	10.30	8.75	6.33	NA
1988	9.32	7.27	10.30	11.63	10.56	9.02	6.02	11.74
I	8.59	6.35	9.70	11.60	10.48	9.00	6.00	NA
II	8.78	6.81	9.70	11.30	10.51	8.67	5.67	NA
III	9.71	7.63	10.70	11.80	10.43	9.00	6.00	NA
IV	10.18	8.27	11.10	11.80	10.82	9.42	6.42	NA
1989	10.88	8.50	12.13	12.68	11.68	9.10	6.10	10.95
I	10.98	9.09	12.10	12.40	11.63	9.40	6.40	NA
II	11.36	8.86	12.80	13.00	12.11	9.50	6.50	NA
III	10.66	8.12	12.00	12.80	11.55	9.00	6.00	NA
IV	10.50	7.91	11.60	12.50	11.41	9.42	5.50	NA
1990	10.01	7.87	10.95	12.28	11.16	8.90	5.82	10.30
I	10.04	8.11	11.20	12.30	11.20	8.50	5.50	NA
II	10.00	8.19	11.40	12.30	11.20	9.01	6.01	NA
III	10.00	7.82	10.20	12.30	11.14	9.08	6.08	NA
IV	10.00	7.36	11.00	12.20	11.10	9.00	5.67	NA
1991	8.47	5.72	9.05	11.33	10.10	8.25	5.00	10.12
I	9.19	6.34	9.60	11.60	10.54	8.50	5.00	NA
II	8.67	5.98	9.10	11.50	10.25	8.25	5.00	NA
III	8.40	5.74	9.40	11.50	10.02	8.25	5.00	NA
IV	7.60	4.82	8.10	10.70	9.59	8.01	5.00	NA
1992	6.25	3.69	6.78	9.43	8.19	6.79	5.00	9.55
I	6.50	4.16	6.80	9.70	8.45	7.17	5.00	NA
II	6.50	3.97	7.20	9.70	8.38	7.00	5.00	NA
III	6.01	3.30	6.80	9.40	8.06	7.00	5.00	NA
IV	6.00	3.34	6.30	8.90	7.85	6.00	5.00	NA

NA = Not Available. 1/ One of several base rates used by banks to price short-term business loans. Annualized using a 360 day bank interest year. 2/ Yield on auction average. 3/ Average effective interest rate on new loans. 4/ New loans 1970-83 and 1989-92; outstanding loans 1984-88. 5/ New operating loans. Rates are weighted by length of time each rate in effect. 6/ Computed from data in Economic Indicators of the Farm Sector, USDA/ERS, most recent issue. Average on outstanding debt, excludes farm operator household debt and interest.

Sources: Economic Research Service, Agricultural Finance Databook, Farm Credit Administration, Individual Farm Credit System district banks, Farmers Home Administration.

Appendix table 5--Interest rates on long-term loans, 1960-92

Year	Agricultural real estate							Average on total farm debt 6/
	U.S. Treasury bond 1/	Commercial bank 2/	Farm Credit System 3/	Life insurance companies 4/	FmHA 5/		Average on outstanding debt 6/	
					Regular	Limited resource		
1960	4.02	NA	NA	NA	5.00	NA	5.00	5.58
1965	4.21	NA	NA	NA	5.00	NA	5.35	5.65
1970	6.58	8.27	8.68	9.31	5.00	NA	5.88	6.58
1975	7.00	9.02	8.69	10.03	5.00	NA	6.98	7.39
1980	10.81	13.76	10.39	13.21	11.05	4.82	8.17	9.58
1981	12.87	16.75	11.27	15.42	13.00	5.50	8.92	10.69
1982	12.23	16.63	12.27	15.51	12.94	6.50	9.58	11.01
1983	10.84	13.76	11.63	12.47	10.79	5.27	9.60	10.50
1984	11.99	14.07	11.76	13.49	10.75	5.25	9.48	10.31
1985	10.75	12.96	12.24	12.61	10.75	5.25	9.06	9.55
I	11.43	13.50	12.24	12.88	10.75	5.25	NA	NA
II	10.91	13.04	12.40	12.73	10.75	5.25	NA	NA
III	10.59	12.86	12.40	12.50	10.75	5.25	NA	NA
IV	10.08	12.44	12.40	12.34	10.75	5.25	NA	NA
1986	8.15	11.56	11.61	11.96	9.13	5.06	9.05	9.56
I	8.90	12.20	11.90	12.78	10.75	5.25	NA	NA
II	7.95	11.78	11.50	12.04	9.25	5.00	NA	NA
III	7.89	11.30	11.10	11.80	8.25	5.00	NA	NA
IV	7.84	10.94	11.95	11.20	8.25	5.00	NA	NA
1987	8.64	11.07	11.10	10.21	8.90	5.00	8.96	9.73
I	7.64	10.78	11.40	9.48	8.25	5.00	NA	NA
II	8.58	11.02	10.90	9.97	8.25	5.00	NA	NA
III	9.08	11.26	10.75	10.50	9.25	5.00	NA	NA
IV	9.24	11.20	11.50	10.88	9.83	5.00	NA	NA
1988	8.98	11.42	10.10	10.05	9.46	5.00	9.46	10.50
I	8.61	11.04	9.88	10.13	9.50	5.00	NA	NA
II	9.06	11.18	9.82	9.90	9.17	5.00	NA	NA
III	9.20	11.60	10.06	10.08	9.50	5.00	NA	NA
IV	9.03	11.84	10.56	10.70	9.67	5.00	NA	NA
1989	8.59	12.08	10.93	10.47	9.46	5.00	9.36	10.06
I	9.19	12.36	10.82	10.71	9.50	5.00	NA	NA
II	8.84	12.18	11.01	10.54	9.17	5.00	NA	NA
III	8.25	11.98	10.62	10.23	9.50	5.00	NA	NA
IV	8.07	11.78	10.65	10.40	9.67	5.00	NA	NA
1990	8.73	11.69	10.56	10.25	8.94	5.00	9.65	9.95
I	8.60	11.74	10.62	9.62	8.75	5.00	NA	NA
II	8.81	11.68	10.67	10.10	9.09	5.00	NA	NA
III	8.91	11.72	10.49	10.30	9.08	5.00	NA	NA
IV	8.61	11.60	10.45	10.97	9.00	5.00	NA	NA
1991	8.16	10.76	9.85	9.75	8.73	5.00	9.26	9.64
I	8.28	11.24	10.19	10.09	8.83	5.00	NA	NA
II	8.39	11.04	9.96	9.83	8.75	5.00	NA	NA
III	8.21	10.76	9.84	9.76	8.75	5.00	NA	NA
IV	7.76	10.00	9.42	9.33	8.58	5.00	NA	NA
1992	7.55	9.53	8.25	9.60	8.13	5.00	9.02	9.26
I	7.73	9.72	8.43	9.93	8.25	5.00	NA	NA
II	7.90	9.66	8.56	9.68	8.25	5.00	NA	NA
III	7.22	9.22	8.13	9.61	8.25	5.00	NA	NA
IV	7.34	NA	7.86	9.10	7.75	5.00	NA	NA

NA = Not Available. 1/ Unweighted average of rates on all outstanding bonds neither due nor callable in less than 10 years. 2/ Average of district banks which reported that period. 3/ New loans 1970-83 and 1989-92; outstanding loans 1984-88. 4/ Estimated by ERS from data obtained in a quarterly life insurance survey. 5/ New farm ownership loans. Rates weighted by length of time each of the various weights existing in the quarter were in effect. 6/ Computed for data in Economic Indicators of the Farm Sector, USDA/ERS, most recent issue. Average on outstanding debt, excludes farm operator household debt and interest. Total farm debt includes both real and nonreal estate loans.

Sources: Economic Research Service, Agricultural Finance Databook, Farm Credit Administration, Individual Farm Credit System district banks, Farmers Home Administration.

Appendix table 6--Commercial bank real estate lending by type of bank, June 30, 1992

Bank group	Commercial banks	Real estate loans/total loans 1/	Nonperforming real estate/total real estate 1/	Total nonperforming loans/total loans	Nonperforming real estate/total nonperforming loans	Weak banks 2/
	No.		Percent			No.
All banks	11,617	42.0	4.43	3.52	52.9	79
Agricultural	3,971	43.4	1.69	1.77	41.4	13
Small nonagricultural	7,033	57.9	1.99	2.02	57.0	61
Urban	5,093	40.8	4.89	3.76	53.1	59
Rural	6,524	51.7	1.56	1.62	49.8	20
Large nonagricultural	613	38.0	5.52	3.99	60.1	5

1/ Ninety days past due and still accruing interest plus nonaccruals. 2/ Weak banks are banks with total nonperforming loans in excess of total capital.

Source: Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Appendix table 7--Banks reporting nonperforming loans greater than capital, 1983-92 1/

Year 2/	Agricultural banks		Nonagricultural banks		Total banks	
	Number	Pct.	Number	Pct.	Number	Pct.
1983	40	0.78	102	1.10	142	0.98
1984	93	1.86	94	1.00	187	1.30
1985	141	2.91	130	1.38	273	1.91
1986	158	3.36	230	2.47	388	2.77
1987	84	1.88	241	2.67	325	2.41
1988	54	1.25	238	2.76	292	2.30
1989	31	0.74	181	2.14	212	1.68
1990	13	0.32	130	1.58	143	1.17
1991	13	0.33	107	1.35	120	1.01
1992	13	0.33	66	0.86	79	0.68

1/ Loans past due 90 days or more and still accruing interest plus loans in nonaccrual status are considered nonperforming. Total capital includes total equity capital plus allowance for loan and lease losses plus minority interest in consolidated notes and debentures. 2/ The 1992 numbers are as of June 30, all others are December 31.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Appendix table 8--Commercial bank failures, 1980-92

Year	Agricultural banks		Nonagricultural banks		Total 1/ banks	
	Number	Pct. 2/	Number	Pct.	Number	Pct.
1980	0	0.00	10	0.11	10	0.07
1981	1	0.02	9	0.10	10	0.07
1982	10	0.19	23	0.25	33	0.23
1983	7	0.14	37	0.40	44	0.31
1984	31	0.62	47	0.50	78	0.54
1985	69	1.42	49	0.52	118	0.83
1986	66	1.41	78	0.84	144	1.03
1987	75	1.67	127	1.41	202	1.50
1988	41	0.95	180	2.09	221	1.71
1989	22	0.53	184	2.18	206	1.63
1990	18	0.44	141	1.76	159	1.30
1991	10	0.25	98	1.24	108	0.91
1992	7	NA	93	NA	100	NA
Total	357	NA	1,063	NA	1,420	NA

NA=Not available. 1/ Totals exclude mutual savings banks, savings and loan associations, commercial banks not insured by the FDIC, and banks headquartered in U.S. possessions and territories. Failures are those declared insolvent and closed by their chartering authorities plus those granted open bank assistance by the FDIC. 2/ Failures as a percent of total banks of this type.

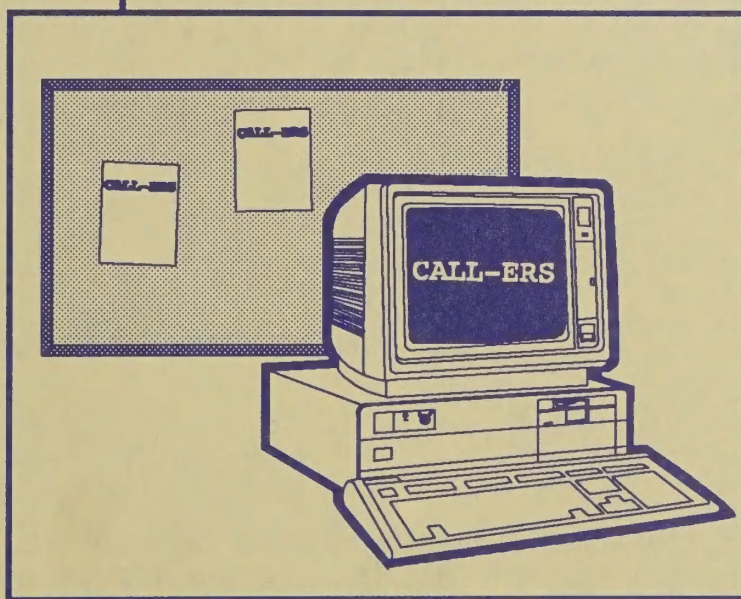
Sources: Calculated from information provided by the Federal Deposit Insurance Corporation and the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

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